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ity, Colorado

FINAL
CONTAMINATION ASSESSMENT REPORT
SITE 3-4
NEMAGON SPILL AREA
VERSION 3.2

March 1988
Contract No. DAAK11-84-D-0017
TASK NO. 7 - LOWER LAKES

EBASCO SERVICES INCORPORATED

R. L. Stollar and Associates
California Analytical Laboratories, Inc.
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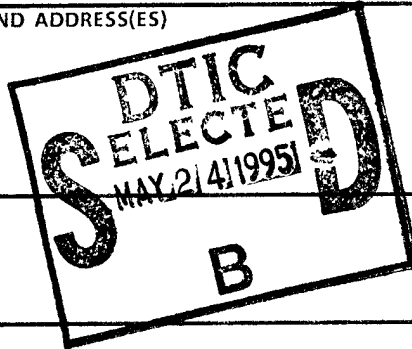
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13. ABSTRACT (Maximum 200 words) THIS FINAL REPORT DOCUMENTS THE PHASE I CONTAMINATION SURVEY OF SITE 3-4, A POSSIBLE DBCP SPILL AREA IN THE RAILROAD YARDS. 91 SAMPLES FROM 26 BORINGS WERE ANALYZED FOR VOLATILE AND SEMIVOLATILE ORGANICS AND METALS WITH SEPARATE ANALYSES FOR AS, HG, AND DBCP. C6H6, CCL4, TCLEE, CD, ZN, AS, AND HG WERE DETECTED WITHIN OR ABOVE THEIR INDICATOR RANGES; HOWEVER, THE CD, ZN, AS, AND HG CONCENTRATIONS APPEARED TO BE CONSISTENT WITH NATURALLY OCCURRING LEVELS. DBCP WAS NOT DETECTED IN THESE SAMPLES, BUT IT WAS FOUND IN A PETREX SOIL GAS INVESTIGATION. A PHASE II PROGRAM CONSISTING OF 10 ADDITIONAL BORINGS IS RECOMMENDED. THE VOLUME OF POTENTIALLY CONTAMINATED SOIL PRESENT IS ESTIMATED AT 5,000 CUBIC YARDS. APPENDICES: CHEMICAL NAMES, PHASE I CHEMICAL DATA, COMMENTS AND RESPONSES, A LETTER TECHNICAL PLAN DATED SEPTEMBER, 1987.			
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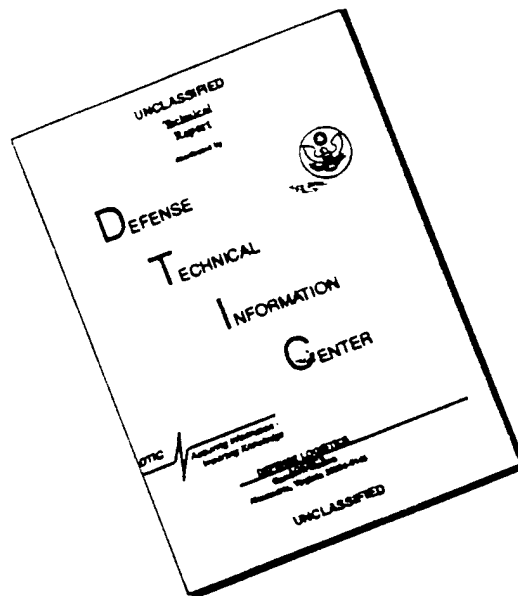
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U.S. ARMY PROGRAM MANAGER'S OFFICE FOR
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP

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EXECUTIVE SUMMARY
SITE 3-4
NEMAGON SPILL AREA

Site 3-4, Nemagon spill area, is located in the western portion of Section 3 on the Rocky Mountain Arsenal. There is concern that a Nemagon (dibromochloropropane) plume may have originated in the vicinity of the railyard. The site was investigated under Task 7 in the summers of 1985 and 1986. A total of 26 borings, yielding 91 samples, were drilled to depths ranging from 5 to 75 feet. Since dibromochloropropane was not detected during the Phase I program, a PETREX soil gas investigation was conducted in the fall of 1987 in areas where dibromochloropropane spills were suspected to have occurred. In addition, 4 borings, yielding 4 composite samples, were drilled to a depth of 5 feet, and were collected within the revised Site 3-4 boundaries as part of the Section 3 nonsource area report.

The following target analytes were detected within or above their indicator levels: benzene, carbon tetrachloride, methylene chloride, tetrachloroethylene, cadmium, zinc, arsenic, and mercury. The cadmium, zinc, arsenic, and mercury concentrations were judged to be consistent with the natural levels of these metals expected in the soils being analyzed. The methylene chloride detected in several samples was not believed to be conclusive evidence of site contamination. Low concentrations of benzene, carbon tetrachloride, and tetrachloroethylene were detected in a single interval of one boring. A number of nontarget compounds, including an isomer of trichlorobenzene, 2,2,4-trimethylhexane, and unknown chlorinated compounds, were also identified tentatively at Site 3-4. The results of a PETREX soil gas program showed that one sample location had a detectable level of dibromochloropropane. This sample was located in the portion of the railyard where the compound supposedly was stored in railcars. Based upon the results of these field investigations and the sources of historic information consulted, additional field investigations are warranted.

A Phase II program consisting of 10 additional borings, yielding 23 samples, is recommended to determine the extent of potential organic contaminants detected during the Phase I and PETREX soil gas programs. Based upon the results of the Phase I and PETREX soil gas programs, the estimated volume of potentially contaminated soil at this site is 5,000 cubic yards.

PHASE I CONTAMINATION ASSESSMENT REPORT

SITE 3-4

NEMAGON SPILL AREA

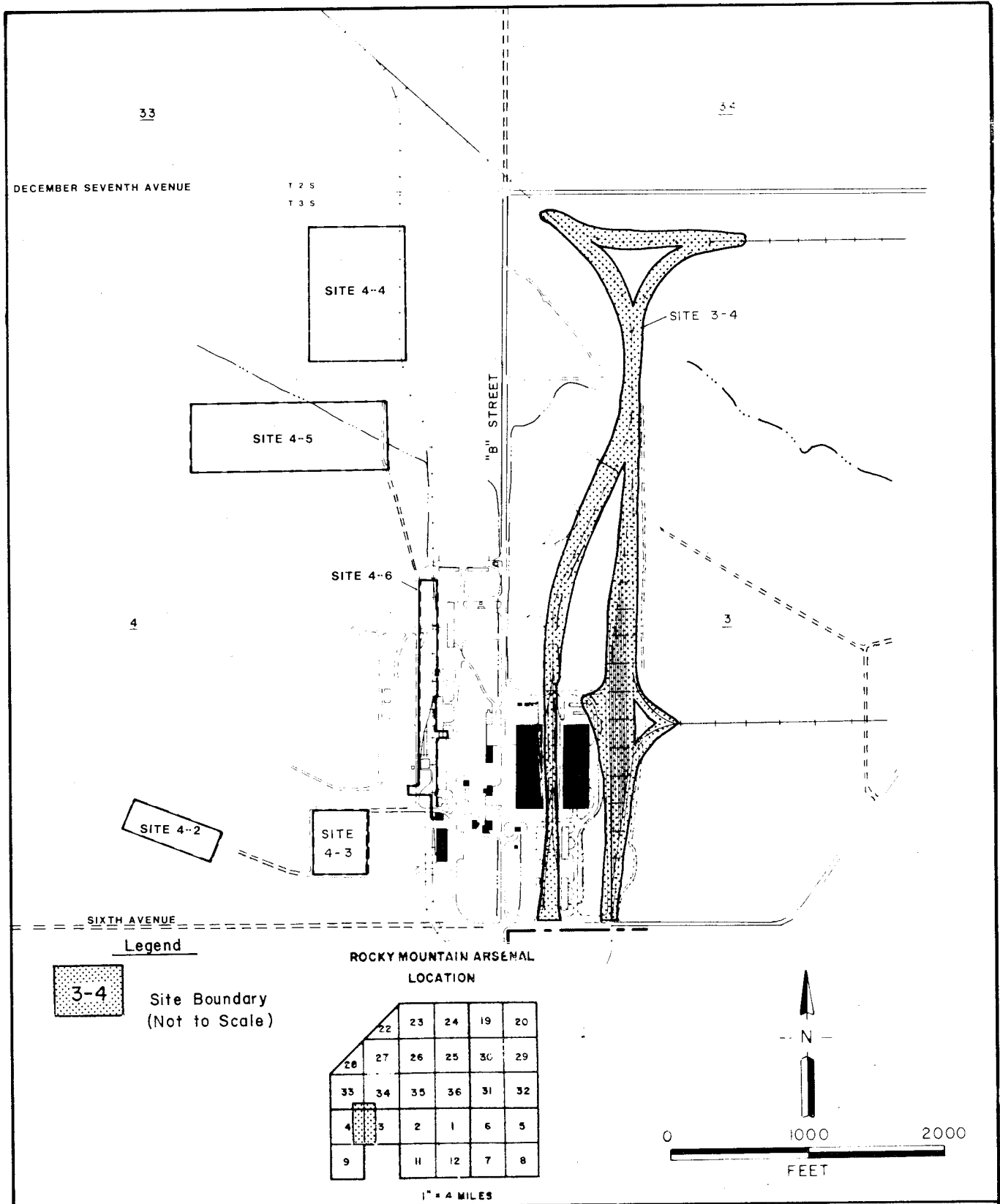
1.0 PHYSICAL SETTING

1.1 LOCATION

Site 3-4, Nemagon spill area, is located in Section 3 on the Rocky Mountain Arsenal (RMA). The site includes the rail classification yard and an area about one mile long centered along the north-south railroad tracks, as shown on Figure 3-4-1. At the time the Phase I investigation was conducted, the site had been defined on the basis of suspected Nemagon (dibromochloropropane) spills. This site, as originally defined by RMACCPMT (1984/RIC 83034R01), encompassed an area of 28,800 square feet (ft²). The few studies that had been conducted up to 1984 could not determine the extent or volume of suspected dibromochloropropane contamination. Preliminary literature investigations indicated that spills could have occurred anywhere within the railyard and along the railroad tracks entering and exiting the yard to the north. Consequently, the site was expanded in the Task 7 Technical Plan (Ebasco, 1986/RIC 86238R01) to an area of 276,000 ft². This area included the rail classification yard and an area 30 feet (ft) wide centered along the north-south railroad tracks in Section 3. It was this site configuration, depicted on Figure 3-4-1, that was investigated during the Phase I program. Following the completion of the Phase I program, additional information regarding the history of this site was obtained, and it was determined that only the internal track systems (Rails 3, 4, and 7) were used to store railcars containing dibromochloropropane (Section 2.0, History). Consequently, the site boundaries for the Phase II program were revised and are depicted in Figure 3-4-7 (Section 3.3). The Phase I boring locations are depicted on Figure 3-4-2.

1.2 GEOLOGY

The two uppermost stratigraphic units beneath Site 3-4 are Quaternary alluvium and the Denver Formation bedrock (May, 1982/RIC 82295R01). Wells drilled near the site (Well 03001, and Well Cluster 03002, 03003, and 03004; see



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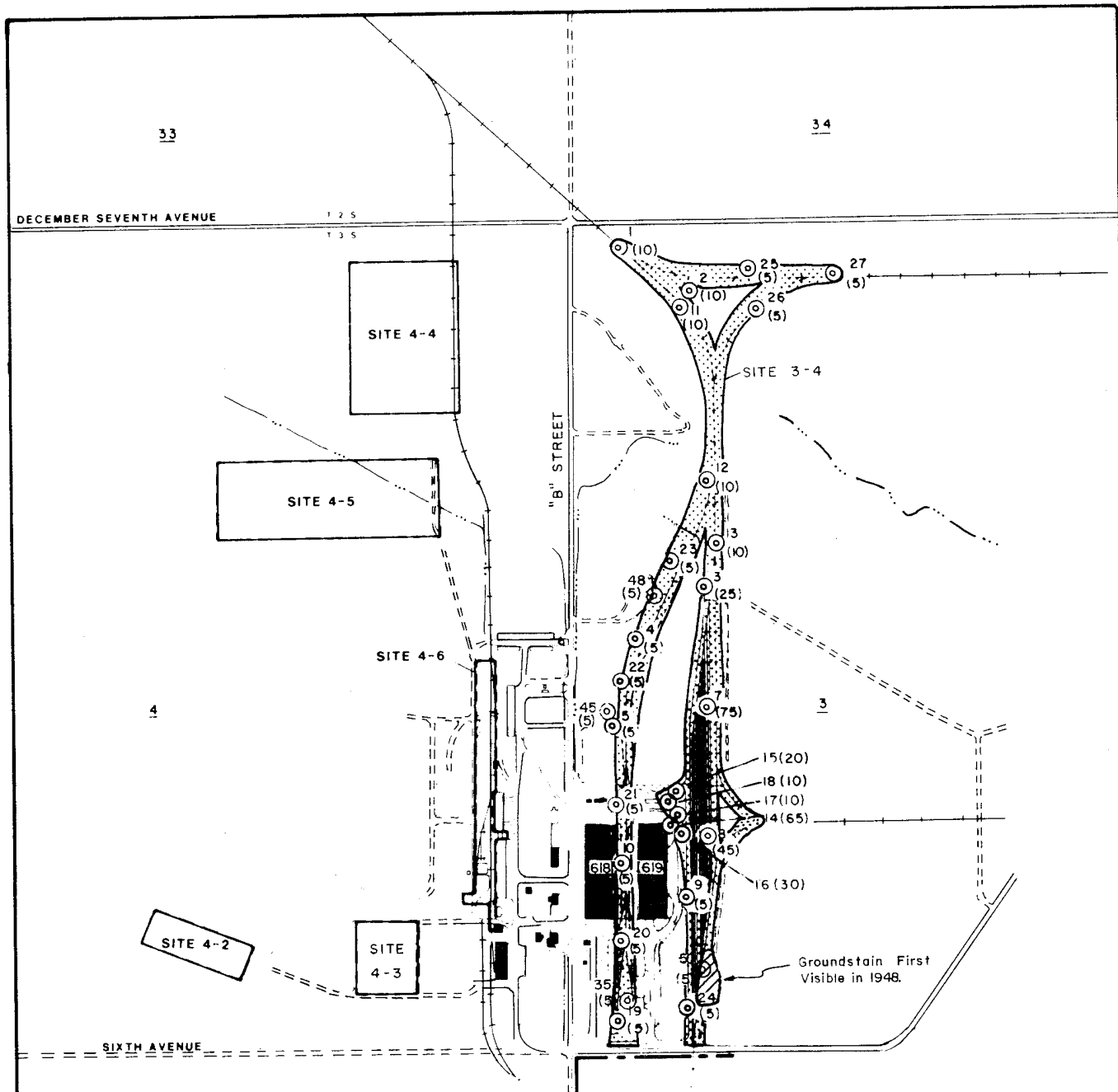
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FIGURE 3-4-1

Location Map

Rocky Mountain Arsenal, Task 7

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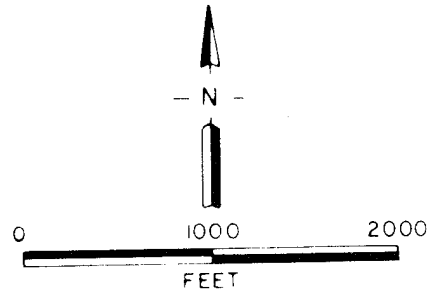


Legend

1 (40) Phase I boring location and depth (ft.)

3-4 Site Boundary (Not to Scale)

Note: Borings 35, 45, 48 and 50 were investigated as part of Section 3-UNC, Task 15



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FIGURE 3-4-2
Vicinity Map Showing Phase I
Boring Locations
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Section 1.3) indicate an alluvial thickness of 105 to 110 ft. The deepest Phase I borings completed at Site 3-4 (Borings 7 and 14) penetrated an alluvial section composed principally of poorly graded sand with lesser amounts of silty and clayey sands (Figures 3-4-3a and 3-4-3b).

The underlying Denver Formation consists of interbedded claystone, sandstone, and sandy claystone. As borings and wells drilled in the vicinity of Site 3-4 did not penetrate the Denver Formation completely, the total thickness of the formation beneath this area is unknown. Bedrock was not reached in any of the Phase I field borings drilled at Site 3-4. However, 78 ft of bedrock consisting mainly of claystone with lesser interbedded lenses of sandstone and siltstone were penetrated about 106 ft below the ground surface, slightly west of the site, when drilling Observation Well 03004. A detailed description of the Denver Formation is found in a study by May (1982/RIC 82295R01).

1.3 HYDROLOGY

Site 3-4 is in the Irondale Gulch drainage basin, which drains northwest toward the South Platte River. The elevation of the site ranges from 5,180 to 5,220 ft above mean sea level (msl). Surface runoff flow directions are variable and localized within the site (Figure 3-4-4). Numerous drainage ditches, some of which channel surface runoff away from the area, are located on or adjacent to Site 3-4. Topographic relief near the site is low, and ponding is common (RMACCPMT, 1983/RIC 83326R01). Dibromochloropropane was detected in one of six surface water samples collected from areas in the vicinity of the railroad classification yard (Geraghty & Miller, 1982/RIC 81342R06). The exact locations of the surface water samples were not documented.

The regional groundwater flow direction in the area is to the north-northwest (ESE, 1986b/RIC 86317R01) as shown in Figure 3-4-5a. Groundwater elevations range from approximately 5,160 ft msl near the southeastern corner of the site to 5,126 ft msl near the northwestern corner of the site. During Phase I drilling at Site 3-4, groundwater was reached at 71.0 ft below the ground surface, 5,135.9 ft msl, in Boring 7 and at 63.5 ft below the ground surface, 5,138.9 ft msl, in Boring 14.

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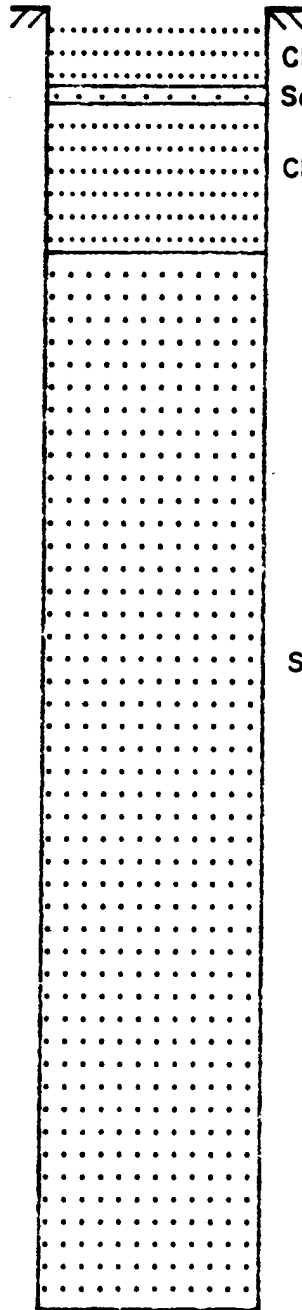
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55

66

77



Clayey Sand (SC)

Sand (SP)

Clayey Sand (SP)

Sand (SP)

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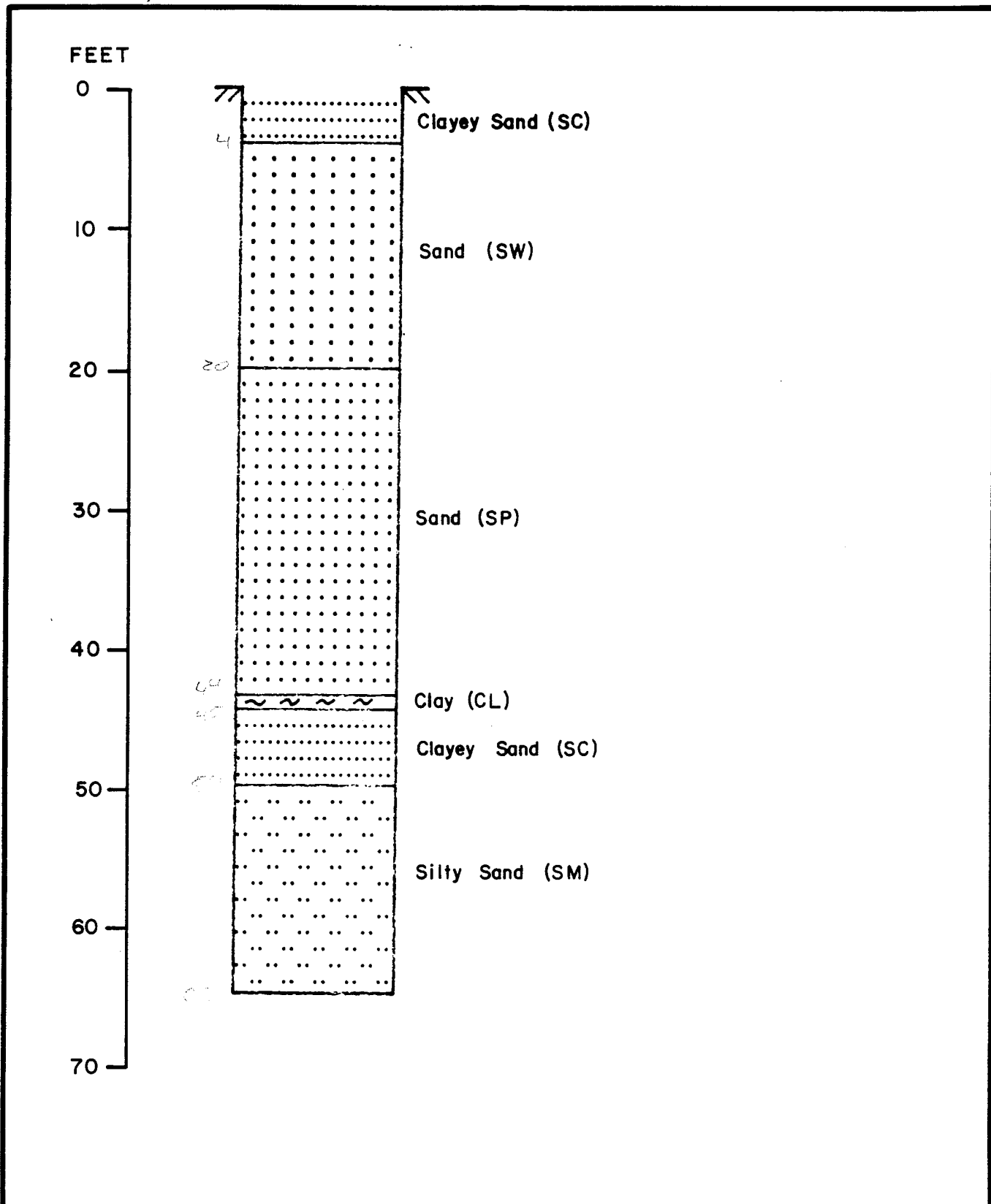
FIGURE 3-4-3a

Field Boring Profile for Boring 7

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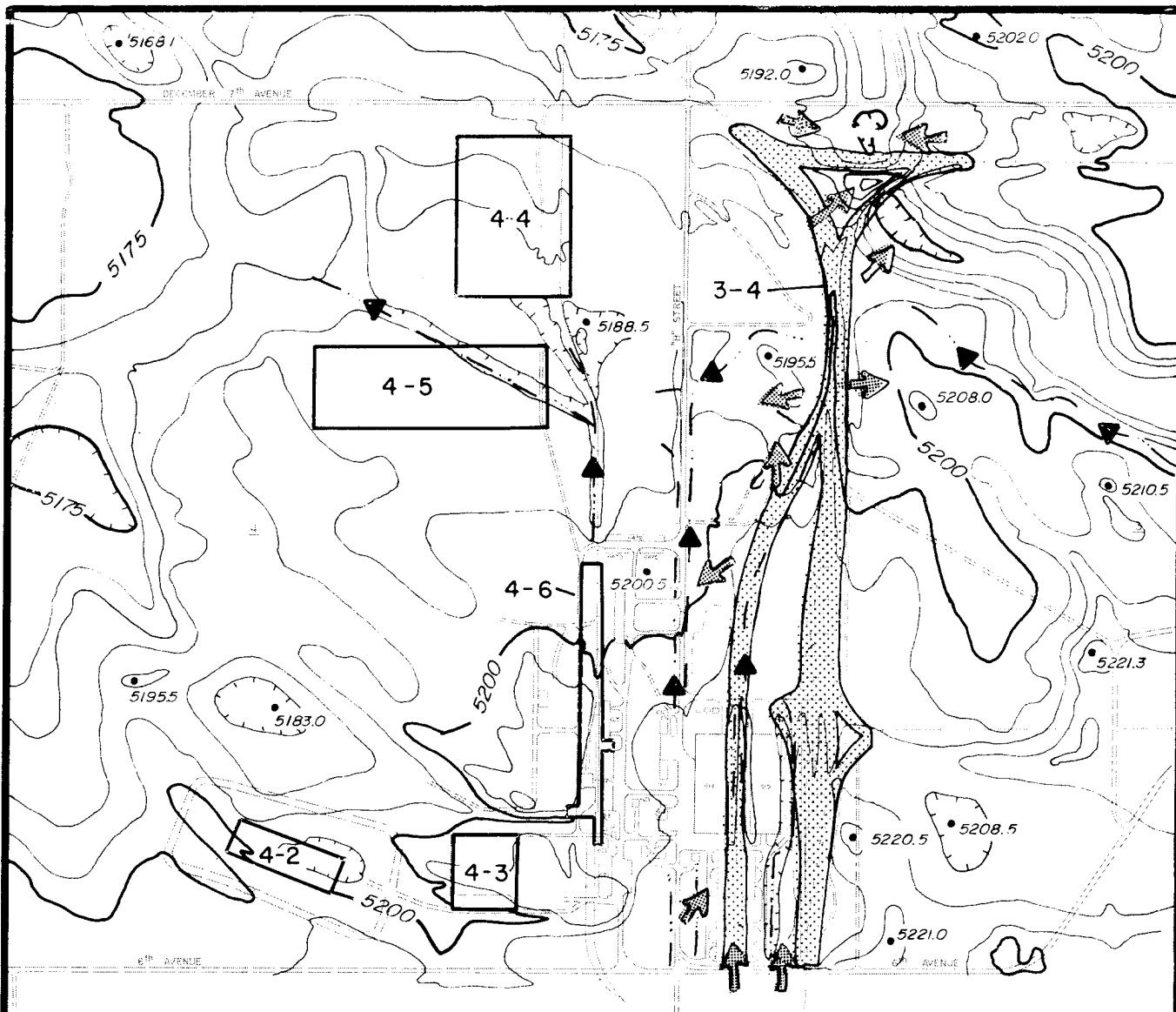
FIGURE 3-4-3b

Field Boring Profile for Boring 14

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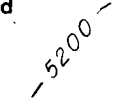
Site Boundary

Legend

Ground Elevation Above Mean Sea Level



Stream or Ditch and Direction of Water Flow

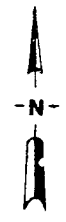


Benchmark Elevation



Direction of Localized Surface Water Flow

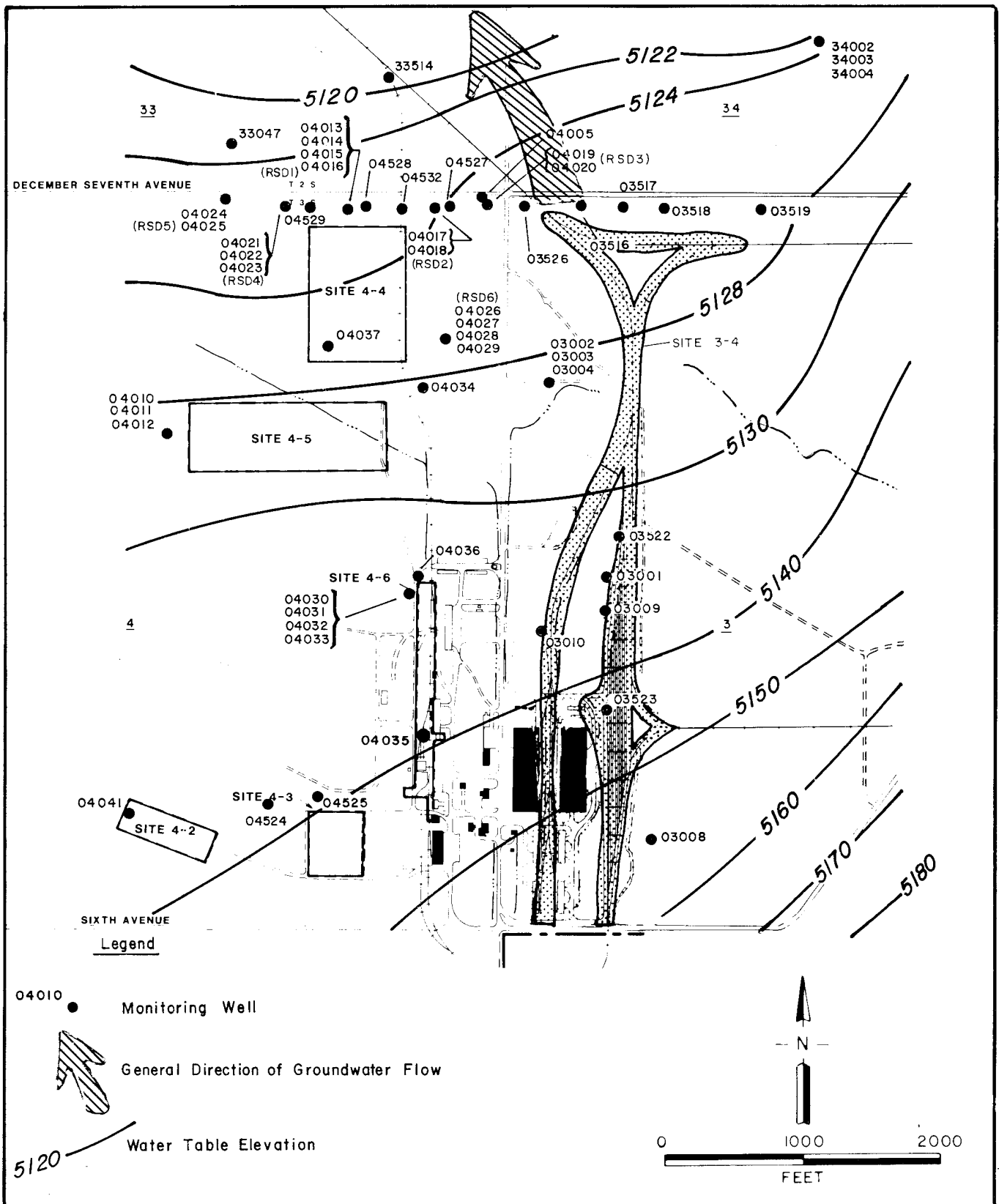
Contour Interval is 5 Feet



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FIGURE 3-4-4
 Topography and Surface Drainage
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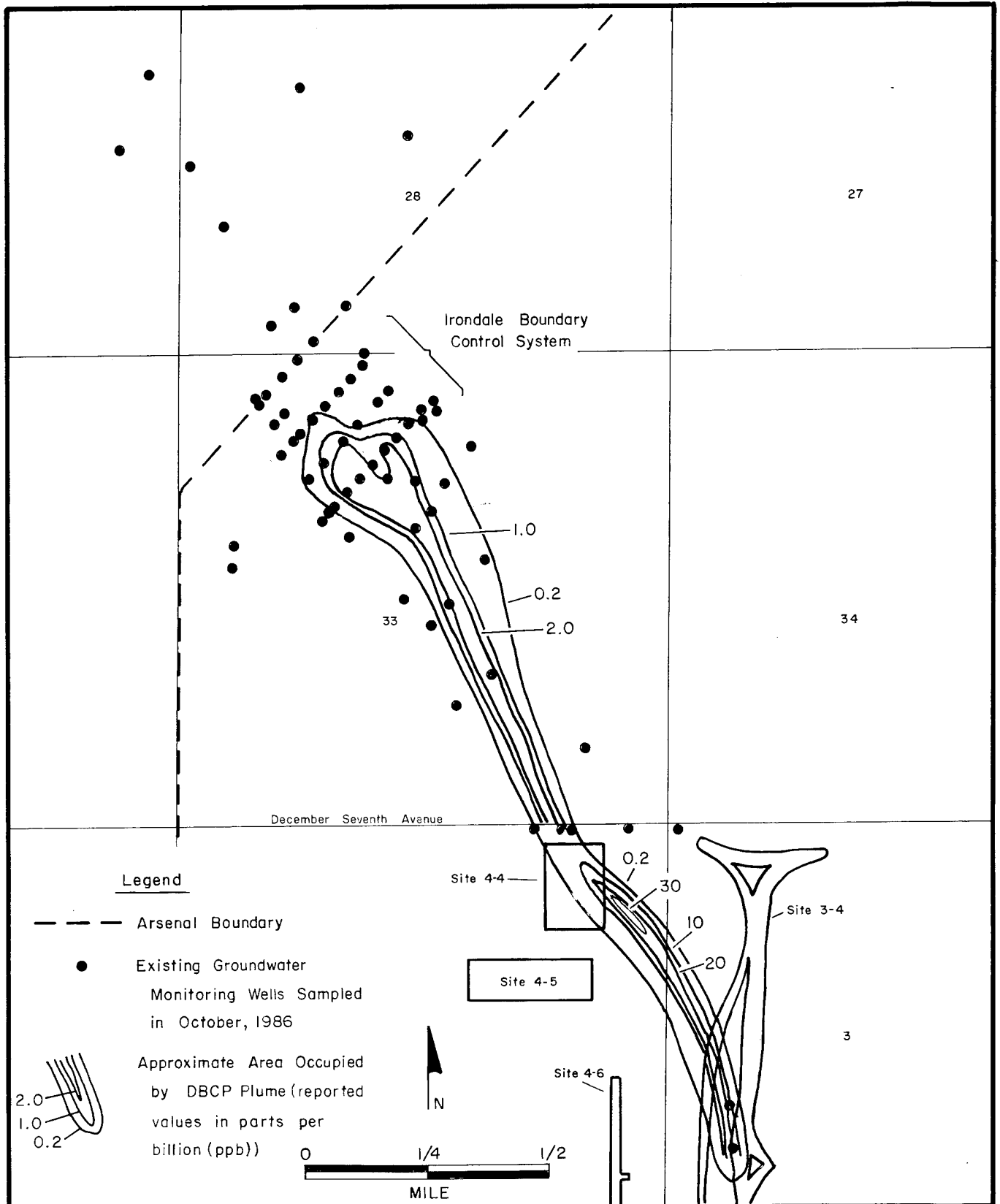
FIGURE 3-4-5a

Water Table Elevations and Generalized
 Groundwater Flow Direction

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Groundwater samples have been collected from several wells over a number of years in the vicinity of Site 3-4. A groundwater sample collected in November 1981 from Well 03523, located in the southern half of the site (Figure 3-4-5a), contained 25 parts per billion (ppb) dibromochloropropane (Whitten & May, 1983/RIC 84065R01). For the same period, dibromochloropropane was also detected approximately 1 mile northwest of Well 03523 in wells within Section 33. At that time, two unconnected dibromochloropropane plumes were hypothesized, one emanating from the railroad yard and another further north in Section 33, referred to as the control system plume. In 1984 and again in 1986, samples from a series of monitoring wells installed northwest of the site to the Shell Irondale Boundary Control System indicated that a potentially continuous dibromochloropropane plume extended from the area around Well 03523 to the control system, as shown in Figure 3-4-5b (Swift & Chiang, 1987). The highest concentrations of dibromochloropropane were detected in a plume extending one-half to three-quarters of a mile to the north from Site 3-4 northwest to Site 4-4. Dibromochloropropane was also detected downgradient from Site 3-4 in 1984, in Well Cluster RSD6 (04026, 04027, 04028, and 04029) at concentrations ranging from 0.7 ppb to 16.8 ppb. It also was detected downgradient in Well Cluster RSD-1 (04013, 04014, 04015, and 04016) in concentrations ranging from 0.73 ppb to 4.83 ppb (Whitten & Shamburger, 1984/RIC 85133R03). Sampling conducted by Environmental Science and Engineering (ESE) late in 1985 and early in 1986 detected dibromochloropropane in RSD-1 (ranging from 0.62 ppb to 6.5 ppb) and RSD-6 (ranging from 0.71 ppb to 37 ppb). It was also detected downgradient in Well 04031 at a concentration of 0.67 ppb and at Well 03523 at 50 ppb (ESE, 1986b/RIC 86317R01). Analysis of a sample for this period from on-site Well 03008, upgradient of Well 03523, detected no dibromochloropropane, but did detect the presence of aldrin, arsenic, and chloride. Trichloroethylene was detected in groundwater samples collected from downgradient Well 04035 (located at Site 4-6 in Section 4 to the west) in December 1986. A sample collected in December 1986 from downgradient Well 04036 contained chloroform and trichloroethylene. Although these compounds were detected in wells downgradient from Site 3-4, there may be other potential sources of these compounds south of RMA (for example, the Montbello industrial complex,



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FIGURE 3-4-5b

Dibromochloropropane (DBCP) Plume
 Map

Rocky Mountain Arsenal, Task 7

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Stapleton International Airport, Denver Public Works Department, U.S. Postal Service). Therefore, the presence of these compounds in the wells does not imply that the site is contributing contamination to the groundwater.

2.0 HISTORY

Information on the history of the area defined as Site 3-4 was gathered through a review of aerial photographs and a search of the literature and of the Shell I, Shell II, and Juris computer databases. Based on a review of these data, Site 3-4 has been identified as a Nemagon spill area.

Aerial photographs taken between 1948 and 1980 yielded the following information on Site 3-4, the Nemagon spill area. These descriptions are interpretations of photographs published in Stout and Abbott (1982/RIC 83368R01).

<u>Photo Date</u>	<u>Site Description</u>
1948	Buildings 618 and 619 and the rail classification yard are visible. A large open storage area, including old propane tanks, truck trailers, and possibly crates, is visible north of Building 618. A large ground stain can be seen adjacent to and east of the railyard, approximately 350 ft north of 6th Avenue. Ground stains are also visible west of "B" Street in Section 4.
1955	The ground stain east of the railyard is still visible. There is another ground stain within the western section of the railyard.
1965	The ground stain east of the railyard is still visible. The ground stain may actually be scrap metal and wood debris resulting from railcar repairs. The ground stain within the railyard is no longer visible. The open storage area contains mounded material, but the northern portion of the open storage area appears unused and has revegetated.

<u>Photo Date</u>	<u>Site Description</u>
1967	The ground stain east of the railyard is less distinct but is still visible. Little activity is discernible in the open storage area north of Building 618.
1970	A large mound of material is visible in the open storage area north of Building 618. The ground stain east of the railyard is still apparent.
1980	Little activity is apparent in the open storage area north of Building 618, and the area largely has been revegetated. The ground stain is still visible east of the railyard.

Based on the various information sources, it appears that Site 3-4 has been used to temporarily "hold over" railcars containing dibromochloropropane intended for shipment by rail and as a storage area for empty railcars. No data were obtained on construction of the rail classification yard. Between 1967 and 1974, dibromochloropropane was handled in railcars at RMA (Adcock, 1985). Between 1970 and 1976, there were about one-hundred bulk shipments of dibromochloropropane from the plant area; these were mostly by rail and there were no indications of leaks (Adcock, 1980). However, the following information on spills that are believed to have occurred somewhere on RMA is summarized from Shell Chemical Company spill reports compiled by Shell. The precise locations of many of the suspected dibromochloropropane spills are unknown. It is possible that the spills occurred in association with the shipping of dibromochloropropane off-site during that period.

<u>Date</u>	<u>Description of Incident</u>
March 1965	The loss of 197 pounds (1b) of Nemagon C [a soil fumigant containing 81.7% 1,2,dibromochloropropane, 4.3% halogenated C ₃ compounds, and 14% inert ingredients] due to leakage was noted; no location given (Unauthored, undated-a).

<u>Date</u>	<u>Description of Incident</u>
September 1965	An 866 lb loss of Nemagon C due to a tank cleaning mishap was noted; no location given (Unauthored, undated-a).
February 1966	The loss of 2,891 lb of Nemagon C due to reprocessing was noted; no location or details were given regarding whether material was recovered (Unauthored, undated-a).
June 1970	The apparent disappearance of 132 five gallon (gal.) pails of Nemagon (660 gal. total), apparently during the shipping of the product off-site, was noted (Shell, 1970). No location of the spill was given. Disappearance may have occurred during transit or may have been shipping manifest error.

Rezai (1985) vaguely recalled a small dibromochloropropane spill of a few gallons in the Army's tank holding area, but did not recall a date or location of the spill. A 1981 Shell memo (Shepherd, 1981) indicates that dibromochloropropane tank cars were held only on Rails 3 and 4 and possibly moved out by Rail 7, as numbered from the west side of the railyard. Also, cars were believed to be held only on the northern half of the yard.

In 1980, dibromochloropropane was detected in the groundwater beneath the community of Irondale, located to the northwest of RMA. Subsequent groundwater sampling resulted in the identification of the rail classification yard as a probable source. A remedial action program, consisting of a system for withdrawing contaminated water, treating it, and recharging it to downgradient wells, was instituted (USAEWES, 1982/RIC 82350R03). This system, the Shell Irondale Boundary Control System, is currently in operation. A monitoring program was also instituted as part of the remedial action program. Shell continues to monitor water levels and water quality in the on-going monitoring program for this system (Anderson, 1986).

A number of pesticides, solvents, and acids were stored in Buildings 616 and 618 in the western portion of Site 3-4 (USAEHA, 1980; USAEHA, 1981). The pesticides stored were either excess materials or were slated for disposal, and included the following: boric acid; Caw Caw Rope (bird repellent); 2,4-D; 2,4,5-T; dalapon (85%); 1,4-D (50%); DDT (20%); diazinon (2%); lindane; naled; grain poisoned with strychnine (0.5%); tordon 101 mixture (pichloram, 39%); and, ground squirrel bait. There is no record indicating that dibromochloropropane was stored in either of the two buildings (Acumenics, 1987).

3.0 SITE INVESTIGATION

3.1 PREVIOUS SOIL INVESTIGATIONS

The regional soil type in the vicinity of RMA is of the Ascalon-Vona-Truckton Association. This association consists of loamy and sandy soils formed in wind-laid deposits on uplands that are somewhat excessively drained to well drained (Kolmer & Anderson, 1977/RIC 81295R07). Specific soils in the vicinity of Site 3-4 are identified as Truckton sandy loams with a 1 to 3 percent slope (USDA, 1974/RIC 81266R54). Truckton soils have a tendency to absorb water rapidly due to the high quantities of sandy materials in the profile. Sandy materials are conductive and support rapid infiltration of potential contaminants.

A soil sample collected at a depth of 2 to 4 ft south of Well 03523 in a low sump area west of the tracks in the rail classification yard were reported to contain 32.6 ppb of dibromochloropropane (Shepherd, 1981). Surface and subsurface soil samples taken at depths up to 45 ft from the vicinity of Well 03523 during 1982 and analyzed by solvent extraction were reported to contain 0.4 to 21 ppb of dibromochloropropane (Geraghty & Miller, 1982/RIC 81342R06). In an attempt to define the extent of dibromochloropropane contamination near Site 3-4, a number of PETREX samplers were installed within the site boundary in a 1986 soil gas test program. No dibromochloropropane was detected by these samplers. These were the only documented soil contamination studies conducted at this site prior to the Phase I program.

3.2 PHASE I SURVEY

3.2.1 Phase I Program

Using the methodology presented in the Task 7 Technical Plan (Ebasco, 1986/RIC 86238R01), 10 borings, yielding 66 samples at a boring density of 1/28,000 ft², were to be drilled to depths ranging from 15 to 45 ft as part of the Phase I program. Seven of these borings were to be in the rail classification yard, and three were to be spaced along the railroad tracks.

A field reconnaissance of the ground surface of the site was conducted prior to the drilling operations to assess and stake the boring locations. The planned locations of Borings 6 and 9 were cleared for safety purposes using geophysical techniques. A 10 ft square grid was centered over the locations and surveyed using an electromagnetic conductivity instrument, a metal detector, and a magnetometer. The results of the survey were used to reposition both of the borings 3 ft to the east of their original locations to avoid a water main. This procedure was conducted for safety purposes, and should not be confused with a reconnaissance geophysical exploration, which was not conducted at this site. The original site boundaries were maintained.

Subsequent to the completion of the Task 7 Technical Plan, historical reviews (Section 2, History) indicated that any potential dibromochloropropane spills were more likely to be located in the northern half of the rail classification yard. Consequently, the sampling program was modified at the site, and a number of new borings added as a result of this additional historical information. The deeper borings planned for Site 3-4 were concentrated in the northern area just to the west of the tracks, particularly in a low spot where runoff from the area could accumulate. In addition, the locations of some other borings were changed and Boring 6 was not drilled due to access difficulties. Further, a number of shallow borings were added to the drilling program along the railroad tracks near the rail classification yard. Although ground stains were noted in historic aerial photographs, borings were not relocated to these areas since the time of appearance and locations of the ground stains did not appear to be related to reported or suspected

dibromochloropropane spills, and in fact may have just been areas where materials such as scrap materials may have been stored. However, four ground stains within the Site 3-4 boundaries were investigated during the Task 15 Section 3 nonsource area field program.

Problems encountered in the field resulted in changes in the depths of some Phase I borings, as well as in the number of samples taken at Site 3-4. Auger plugging occurred during the drilling of Boring 7 at depths of 29, 53, 57, and 62 ft, and during the drilling of Boring 8 at the 18.5 ft depth. However, samples were collected at the preselected intervals. During the drilling of Boring 8, repeated jamming of the core barrel during the lower 16 ft (29-45 ft interval) required two attempts to clear the barrel for every 5 ft of penetration. A jammed core barrel was also responsible for the loss of the 9 to 10 ft sample during the second day of drilling at Boring 3. Groundwater at this site was deeper than originally anticipated. It was reached at 71 ft in Boring 7 and at 63.5 ft in Boring 14. These borings were completed to the bottom of the next 5 ft interval after groundwater was reached, or to 75 and 65 ft, respectively. The last sample in Boring 14 was taken at 60 ft.

The Site 3-4 field investigation was conducted in the summers of 1985 and 1986. Twenty-six borings, yielding 91 samples, were actually drilled as follows:

<u>Boring No.</u>	<u>Depth (ft)</u>	<u>No. of Samples</u>
1	10	3
2	10	3
3	25	5
4	5	2
5	5	2
6	Not drilled	-
7	75	11
8	45	8

<u>Boring No.</u>	<u>Depth (ft)</u>	<u>No. of Samples</u>
9	5	2
10	5	2
11	10	3
12	10	3
13	10	3
14	65	9
15	20	5
16	30	6
17	10	3
18	10	3
19	5	2
20	5	2
21	5	2
22	5	2
23	5	2
24	5	2
25	5	2
26	5	2
27	5	2

In addition to the 26 borings sampled for Site 3-4 under Task 7, 4 additional borings were placed near the site boundaries under Task 15 as part of the Section 3 nonsource area investigation. These were Borings 35, 45, 48, and 50 (Figure 3-4-2). Boring 50 was placed within the boundaries of the ground stain in the southeastern corner of the site. Boring 35 was placed between Buildings 614 and 615. Boring 45 was placed in an open storage area, 054, and Boring 48 was placed in an old tank cradle. The borings were drilled to 5 ft, and a composite sample analyzed for each boring.

All samples were analyzed by gas chromatography/mass spectrometry (GC/MS) for volatile organics (except the 0-1 ft interval) and semivolatile organics; by an inductively coupled argon plasma (ICP) screen for metals; and by separate

analyses for dibromochloropropane, arsenic, and mercury. Appendix 3-4-A presents the specific target analytes for which laboratory analyses were conducted. A summary of the results of these analyses is presented in Table 3-4-1, Section 3.2.4 of this report.

Since the Phase I boring program did not detect dibromochloropropane, a PETREX static trapping soil gas program was conducted in the fall of 1987 to further investigate for dibromochloropropane. This program is described in Appendix 3-4-D. To determine the applicability of the PETREX soil gas technique for detecting dibromochloropropane, a laboratory test program was conducted. PETREX samplers were exposed above water and soil spiked with dibromochloropropane. It was found that dibromochloropropane could be detected in samplers exposed 1 day above water spiked in the low microgram per liter range. It was also found that dibromochloropropane could be detected in samplers exposed 14 days in soil spiked in the low microgram per kilogram range. The results of the laboratory program showed that the PETREX soil gas method could detect dibromochloropropane at acceptably low concentrations.

Based on the results of the laboratory program, a field program consisting of 90 sample locations was initiated. Of the 89 samplers actually placed, 80 were along Rails 3, 4, and 7 in the eastern portion of the site, and 9 were in an area that contains runoff from the rail lines east of Building 619. Sample tubes were spaced approximately 40 ft apart on either side of the three rail lines and are shown on Figure 3-4-6b. Each sampler was analyzed specifically for dibromochloropropane. One of the sample tubes broke during sample placement and was not replaced.

3.2.2 Phase I Field Observations

Site 3-4 is centered along railroad tracks running north-south. It is surrounded by roads on three sides and a firebreak to the east. The site is flat and sparsely vegetated with grass, small shrubs, and a few small trees. Numerous railcars are stationed on the railroad tracks.

For safety purposes, in situ air monitoring was conducted during drilling operations using a photoionization detector (HNU), an organic vapor analyzer (OVA), and an explosimeter. OVA readings were at or slightly above background at several of the borings except Borings 7 and 8, which were more elevated but judged to be insignificant. In Boring 7, the explosimeter registered a reading of 15 percent of the lower explosive limit at 50 ft. No HNU readings were taken for Boring 7 below 50 ft. The results of the volatile organic readings down the borings at the sampled depths are presented in Table 3-4-2, Section 3.2.4 of this report.

An M8 alarm was used at Borings 3, 7, and 8 to monitor for the presence of chemical agents in the borehole or soil samples according to standard operating procedures. The M8 alarm is used specifically to detect sarin (GB) and VX at detection levels of 0.2 and 0.4 milligrams per cubic meter after a response time of 2 to 3 minutes (USAMDARC, 1979; USAMDARC, 1982). However, many other substances in addition to these two target compounds can cause the M8 alarm to respond, including smoke and engine exhaust.

No chemical agents were detected at this site by the M8 monitoring. No unexploded ordnance, buried metal, or other objects were detected during drilling. No unusual coloring or staining of the core samples was noted.

3.2.3 Geophysical Exploration

No geophysical exploration of Site 3-4 was conducted as there was no likelihood that unexploded ordnance, buried metal, or other buried objects would be present.

3.2.4 Phase I Analyte Levels and Distribution

Benzene, carbon tetrachloride, methylene chloride, tetrachloroethylene, cadmium, zinc, arsenic, and mercury were detected within or above their indicator levels in soil samples from Site 3-4. No analytes were detected within or above their indicator levels in samples from the four borings collected during the Section 3 nonsource area investigation. The number of samples containing these analytes, and the concentration range, median, mean,

standard deviation, detection limit, and indicator level are listed in Table 3-4-1. The results of geologic field observations, air monitoring during drilling, and the chemical analysis of each soil sample are summarized in Table 3-4-2.

Indicator ranges were established to assess the significance of metal and organic analytical values. The indicator level is the method detection limit for organic compounds. The indicator range for metals reflects the concentrations expected to occur naturally in RMA alluvial soils. Selection of these ranges is discussed in the Introduction to the Contamination Assessment Reports (ESE, 1986a).

Benzene, carbon tetrachloride, and tetrachloroethylene were detected at concentrations of 0.6, 0.3, and 0.4 micrograms per gram (ug/g), respectively, in Boring 27 (4-5 ft interval). Low concentrations of methylene chloride ranging from 1 to 5 ug/g were detected in 15 of the 91 samples from Site 3-4. Cadmium and arsenic were detected within their indicator ranges in four and one borings, respectively. Mercury was detected in two borings but was above its indicator range only in Boring 8 (0.2 ug/g in the 9-10 ft interval). Zinc was detected in all of the 91 samples, but was above its indicator range in only Boring 7 (190 ug/g in the 49-50 ft interval) and Boring 25 (100 ug/g in the 0-1 ft interval). The distribution of the analytes detected within or above their indicator levels in the Phase I program is presented in Figure 3-4-6a. A tabulation of all analytical data associated with the Phase I program is presented in Appendix 3-4-B.

In addition, several compounds were detected by GC/MS that were not included in the target compound list and that were not identified conclusively. Table 3-4-3 lists the boring number, sample interval depth, relative retention time (shown as "unknown number" on the table), concentration, sample number, lot, best-fit identification, and comments for these nontarget compounds detected at Site 3-4. It should be noted that an individual compound may have more than one retention time, and also that a particular retention time may be

Table 3-4-1. Summary of Analytical Results for Site 3-4. Page 1 of 1.

Constituent	Number of Samples*	Range	Median**	Mean**	Standard Deviation**	Concentration (ug/g)		Indicator Level
						DataChem Detection Limit	CAL Detection Limit	
<u>Volatiles (N=65)</u>								
Benzene	1	0.6	-	-	-	0.3	0.3	DL
Carbon tetrachloride	1	0.3	-	-	-	0.3	0.3	DL
Methylene chloride	15	1-5	2	2	1	2	0.7	DL
Tetrachloroethylene	1	0.4	-	-	-	0.3	0.3	DL
<u>Semivolatiles (N=95)</u>								
None detected								
<u>Dibromochloropropane (N=95)</u>								
None detected								
<u>ICP Metals (N=95)</u>								
Cadmium	5	0.97-1.4	1.2	1.2	0.19	0.74	0.66	1.0-2.0
Chromium	41	6.5-21	12	12	3.7	6.5	5.2	25-40
Copper	57	5.6-19	9.4	9.9	3.3	4.7	4.9	20-35
Lead	20	11-24	14	15	4.2	8.4	13	25-40
Zinc	95	11-190	27	32	22	8.7	9.5	60-80
<u>Arsenic (N=95)</u>								
	1	3.0	-	-	-	2.5	5.0	DL-10
<u>Mercury (N=95)</u>								
	2	0.070-0.20	-	-	-	0.050	0.060	DL-0.10

DL - The indicator level is the detection limit for DataChem and CAL Laboratories, as appropriate
 N - Number of samples analyzed
 * - Number of samples in which constituent was detected; only these sample results were used in statistical analyses
 ** - Median, mean, and standard deviation not calculated when constituent detected in fewer than 5 samples

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Table 3-4-2. Results of Phase I Field Study. Page 1 of 15.

Depth (feet)	Boring 1				Boring 2				
	0-1	4-5	9-10	0-1	4-5	9-10	0-1	4-5	9-10
Geologic Material	Silty Very Fine Sand	Silty Very Fine Sand	Silty Very Fine Sand	Clayey/Silty Very Fine Sand	Silty Very Fine Sand	Silty Very Fine Sand	Silty Very Fine Sand	Silty Very Fine Sand	Silty Very Fine Sand
Percent Fines ^{VO}	35	40	30	35	30	30	35	30	35

AIR MONITORING

Volatile Organic Readings (ppm)

HNUS	NR	NR	NR	NR	NR	NR	NR	NR	NR
OVAS	BKD	1.5-4.0	1.5-4.0	BKD	BKD	BKD	BKD	BKD	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	BDL	NA	BDL	BDL	BDL	BDL	BDL
Carbon tetrachloride	NA	BDL	BDL	NA	BDL	BDL	BDL	BDL	BDL
Methylene chloride	NA	BDL	BDL	NA	BDL	BDL	BDL	BDL	BDL
Tetrachloroethylene	NA	BDL	BDL	NA	BDL	BDL	BDL	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	14	16	11	BDL	14	16	14	16	16
Copper	14	17	9.5	7.1	10	17	10	17	17
Lead	22	13	BDL	BDL	12	12	12	12	12
Zinc	52	49	27	17	39	51	39	51	51

Arsenic (ug/g)

Arsenic	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3.0
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Mercury (ug/g)

Mercury	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
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BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 2 of 15.

Depth (feet)	Boring 3				Boring 4	
	0-1	4-5	14-15	19-20	24-25	0-1
Geologic Material	Sandy Clay Silt	Sand Trace Silt	Sand	Sand Trace Silt	Coarse Sand w/Clay Layer	Silty Fine Sand
Percent FinesVO	65	5	0	5	65	40
						30/60
						Silty Sand/Top Silty/Clayey Very Fine to Fine Sand

AIR MONITORING

Volatile Organic Readings (ppm)

HNUS	BKD	BKD	BKD	BKD	BKD	NR
OVAS	BKD	BKD	BKD	BKD	BKD	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	BDL	BDL	BDL	BDL
Carbon tetrachloride	NA	BDL	BDL	BDL	BDL	BDL
Methylene chloride	NA	2	2	5	2	BDL
Tetrachloroethylene	NA	BDL	BDL	BDL	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	6.8	BDL	BDL	BDL	BDL	9.2
Copper	8.3	BDL	BDL	BDL	BDL	12
Lead	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	34	20	13	22	18	36

Arsenic (ug/g)

	BDL	BDL	BDL	BDL	BDL	BDL
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Mercury (ug/g)

	BDL	BDL	BDL	BDL	BDL	BDL
--	-----	-----	-----	-----	-----	-----

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 3 of 15.

Depth (feet)	Boring 5			Boring 7			
	0-1 Silty Fine to Medium Sand	4-5 Silty Fine to Medium Sand	0-1 Clayey Sand	4-5 Clayey Sand/ Coarse Sand	9-10 Clayey Sand	14-15 Sand Trace Silt	19-20 Sand
Percent FinesVO	30	20	15	20/5	40	5	0

AIR MONITORING

Volatile Organic Readings (ppm)

HNU'S	NR	NR	BKD	BKD	BKD	BKD	BKD
OVA S	BKD	BKD	1.0	2.0	3.0	3.0	NR

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	NA	BDL	BDL	BDL	BDL
Carbon tetrachloride	NA	BDL	NA	BDL	BDL	BDL	BDL
Methylene chloride	NA	BDL	NA	BDL	BDL	BDL	1
Tetrachloroethylene	NA	BDL	NA	BDL	BDL	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	BDL	BDL	7.4	BDL	BDL	BDL
Copper	BDL	BDL	BDL	11	7.3	BDL	6.5
Lead	13	13	BDL	BDL	BDL	BDL	BDL
Zinc	30	30	26	30	26	21	23
Arsenic ug/g	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mercury (ug/g)	BDL	BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 4 of 15.

Boring 7

Depth (feet)	28-29	39-40	49-50	59-60	69-70	74-75
Geologic Material	Sand	Sand Trace Clay	Sand w/ Clay Layer	Sand	Sand	Sand Trace Clay
Percent Fines ^{VO}	0	5	10	0	0	5

AIR MONITORING

Volatile Organic Readings (ppm)

HNUS	BKD	BKD	BKD	NR	NR	NR
OVAS	3.0*	28**	18***	5.0 ⁺	47 ⁺⁺	1.0

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	BDL	BDL	BDL	BDL	BDL	BDL
Carbon tetrachloride	BDL	BDL	BDL	BDL	BDL	BDL
Methylene chloride	BDL	4	BDL	BDL	BDL	1
Tetrachloroethylene	BDL	BDL	BDL	BDL	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	1.3	BDL	0.97	1.0	1.2	1.4
Chromium	BDL	BDL	BDL	BDL	BDL	BDL
Copper	BDL	11	12	BDL	BDL	8.7
Lead	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	23	42	190	23	19	30

Arsenic ug/g)

Mercury (ug/g)

Arsenic	BDL	BDL	BDL	BDL	BDL	BDL
Mercury	BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit
 BKD - Background
 NR - Not reported
 S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level
 VO - As determined by visual observation and rounded to the nearest 5 percent
 * - 1.0 ppm reading obtained at 25 foot level
 ** - 2.0 ppm reading obtained at 35 foot level
 *** - 60 ppm reading obtained at 45 foot level
 + - 52 ppm reading obtained at 57.5 foot level
 ++ - 29 ppm reading obtained at 62.5 foot level, 57 ppm reading obtained at 65 foot level

Table 3-4-2. Results of Phase I Field Study. Page 5 of 15.

Boring 8

Depth (feet)	0-1	4-5	9-10	14-15	19-20	29-30	39-40	44-45
Geologic Material	Sand Trace Silt	Sand Trace Silt	Sand w/ Silt and Clay	Coarse Sand and Gravel	Sand Trace Silt	Gravelly Sand	Sand Trace Silt	Gravelly Sand
Percent FinesVO	5	5	10	0	5	0	5	0

AIR MONITORING

Volatile Organic Readings (ppm)

HNUS	BKD	BKD	BKD	BKD	150	BKD	BKD	BKD
OVAS	BKD	5.0	7.0	11	3.0-21	11	NR*	NR**

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Carbon tetrachloride	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methylene chloride	NA	5	3	1	2	1	2	3
Tetrachloroethylene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	BDL	8.1	BDL	BDL	BDL	BDL	BDL
Copper	BDL	BDL	9.4	BDL	BDL	6.6	6.0	BDL
Lead	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	20	17	31	15	18	23	19	12

Arsenic ug/g

Arsenic	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
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Mercury (ug/g)

Mercury	BDL	BDL	0.20	BDL	BDL	BDL	BDL	BDL
---------	-----	-----	------	-----	-----	-----	-----	-----

BDL - Below detection limit
 BKD - Background
 NA - Not analyzed
 NR - Not reported
 S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level
 VO - As determined by visual observation and rounded to the nearest 5 percent
 * - 21 ppm reading obtained at 35 foot level
 ** - 0.0 ppm reading obtained at 42 foot level

Table 3-4-2. Results of Phase I Field Study. Page 6 of 15.

Depth (feet)	Boring 9			Boring 10			Boring 11		
	0-1	4-5	0-1	4-5	0-1	4-5	0-1	4-5	9-10
Geologic Material	Very Fine to Fine Sand	Silty Fine to Medium Sand	Silty Fine Sand	Silty Fine Sand	Silty Fine Sand	Silty Fine Sand	Silty Fine Sand	Silty Fine Sand	Silty Fine to Medium Sand
Percent FinesVO	60	50	15	15	40	35	40	35	30

AIR MONITORING

Volatile Organic Readings (ppm)

HNUS	NR	NR	NR	NR	NR	NR	NR	NR	NR
OVAS	BKD	BKD	BKD	BKD	BKD	BKD	BKD	BKD	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	NA	BDL	NA	BDL	NA	BDL	BDL
Carbon tetrachloride	NA	BDL	NA	BDL	NA	BDL	NA	BDL	BDL
Methylene chloride	NA	BDL	NA	BDL	NA	BDL	NA	BDL	BDL
Tetrachloroethylene	NA	BDL	NA	BDL	NA	BDL	NA	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	9.8	9.6	8.2	BDL	17	BDL	9.2	9.2
Copper	7.8	BDL	9.7	6.4	BDL	16	BDL	9.6	9.6
Lead	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	33	37	38	29	15	50	15	31	31
Arsenic ug/g)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mercury (ug/g)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 7 of 15.

Depth (feet) Geologic Material	Boring 12				Boring 13	
	0-1 Silty Very Fine Sand	4-5 Silty Sand	9-10 Silty Sand	0-1 Backfill	4-5 Silty Fine Sand	9-10 Very Fine Sand/ Silt and Clay
Percent FinesVO	50	40	30	10	25	50

AIR MONITORING

Volatiles Organic Readings (ppm)

HNUS OVS	NR BKD	NR BKD	NR BKD	NR BKD	NR BKD	NR 0.5*

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	BDL	NA	BDL	BDL
Carbon tetrachloride	NA	BDL	BDL	NA	BDL	BDL
Methylene chloride	NA	BDL	BDL	NA	BDL	BDL
Tetrachloroethylene	NA	BDL	BDL	NA	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	15	14	BDL	BDL	9.7	8.0
Copper	13	9.9	BDL	8.7	6.3	8.6
Lead	15	BDL	BDL	11	BDL	BDL
Zinc	52	45	23	28	27	33

Arsenic ug/g

	BDL	BDL	BDL	BDL	BDL	BDL
--	-----	-----	-----	-----	-----	-----

Mercury (ug/g)

	BDL	BDL	BDL	BDL	BDL	BDL
--	-----	-----	-----	-----	-----	-----

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNUS; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Reading taken over cuttings

Table 3-4-2. Results of Phase I Field Study. Page 8 of 15.

Boring 14

Depth (feet)	Geologic Material	0-1	4-5	9-10	14-15	19-20	29-30	39-40	49-50	59-60
		Clayey Sand	Clayey Sand	Sand	Gravelly Sand Trace Silt	Sand w/ Silt	Gravelly Sand Trace Silt	Gravelly Sand w/Trace Silt	Gravelly Sand w/ Clay	Silty Sand w/Gravel
Percent FinesVO		14	29	0	5	10	5	5	20	23

AIR MONITORING

Volatile Organic Readings (ppm)

HNUIS	OVAS	NR	BKD	NR	BKD	NR	BKD	NR	BKD	NR	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Carbon tetrachloride	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methylene chloride	NA	BDL	BDL	BDL	BDL	BDL	BDL	2	BDL	BDL	BDL
Tetrachloroethylene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	6.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Copper	6.6	9.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	23	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	60	32	17	11	20	12	11	11	15	15	15

Arsenic ug/g

Mercury (ug/g)

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 9 of 15.

		Boring 15				
Depth (feet)		0-1	4-5	9-10	14-15	19-20
Geologic Material		Silty Fine Sand	Silty Sand	Very Fine Sand Trace Silt	Silty Sand	Sand Trace Silt
Percent FinesVO		40	25	5	15	5

AIR MONITORING

Volatiles Organic Readings (ppm)

HNU/S	NR	NR	NR	NR	NR
OVA/S	BKD	BKD	BKD	BKD	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	BDL	BDL	BDL
Carbon tetrachloride	NA	BDL	BDL	BDL	BDL
Methylene chloride	NA	BDL	BDL	BDL	BDL
Tetrachloroethylene	NA	BDL	BDL	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL
Chromium	14	12	17	19	BDL
Copper	8.0	6.1	9.9	12	BDL
Lead	13	BDL	11	BDL	BDL
Zinc	46	26	53	43	24

Arsenic ug/g

BDL	BDL	BDL	BDL	BDL	BDL
-----	-----	-----	-----	-----	-----

Mercury (ug/g)

BDL	BDL	BDL	BDL	BDL	BDL
-----	-----	-----	-----	-----	-----

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 10 of 15.

Boring 16

Depth (feet)	0-1	4-5	9-10	14-15	19-20	29-30
Geologic Material	Sand Trace Silt	Sand Trace Silt	Gravelly Silty Sand	Clayey Silty Sand	Silty Sand	Silty Fine Sand
Percent FinesVO	5	5	20	30	15	25

AIR MONITORING

Volatile Organic Readings (ppm)

HNU ^S	NR	NR	NR	NR	NR	NR
OVA ^S	BKD	BKD	5.0	1.0	BKD	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	BDL	BDL	BDL	BDL
Carbon tetrachloride	NA	BDL	BDL	BDL	BDL	BDL
Methylene chloride	NA	BDL	BDL	BDL	BDL	BDL
Tetrachloroethylene	NA	BDL	BDL	BDL	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	BDL	BDL	BDL	BDL	BDL
Copper	BDL	BDL	8.4	6.3	BDL	BDL
Lead	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	27	18	32	24	14	15

Arsenic ug/g

BDL	BDL	BDL	BDL	BDL	BDL	BDL
-----	-----	-----	-----	-----	-----	-----

Mercury (ug/g)

BDL	BDL	BDL	BDL	BDL	BDL	BDL
-----	-----	-----	-----	-----	-----	-----

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 11 of 15.

Depth (feet) Geologic Material	Boring 17			Boring 18		
	0-1 Silty Fine Sand	4-5 Silty Fine Sand	9-10 Silty/Clayey Fine Sand	0-1 Fine Sand Trace Silt	4-5 Fine Sand Trace Silt	9-10 Fine Sand Trace Silt/ Clayey Sand
Percent FinesVO	15	20	35	5	5	5/25

AIR MONITORING

Volatiles Organic Readings (ppm)

HNUS	NR	NR	NR	NR	NR	NR
OVAS	BKD	BKD	2.0	BKD	BKD	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	BDL	NA	BDL	BDL
Carbon tetrachloride	NA	BDL	BDL	NA	BDL	BDL
Methylene chloride	NA	BDL	BDL	NA	BDL	BDL
Tetrachloroethylene	NA	BDL	BDL	NA	BDL	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	BDL	BDL	9.0	8.0	14
Copper	6.5	5.8	BDL	5.7	BDL	12
Lead	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	25	20	27	26	25	42

Arsenic ug/g)

Mercury (ug/g)

Arsenic	BDL	BDL	BDL	BDL	BDL	BDL
Mercury	BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 12 of 15.

Depth (feet) Geologic Material	Boring 19		Boring 20		Boring 21	
	0-1 Fine to Medium Sand and Silt	4-5 Fine Sand Trace Silt	0-1 Fine Sandy Silt	4-5 Fine Sandy Silt	0-1 (Rubble) Sand and Gravel Silt/Clayey Fine Sand	4-5 Silty Fine Sand
Percent FinesVO	50	5	80	70	40	35

AIR MONITORING

Volatile Organic Readings (ppm)

HNU'S	NR	NR	NR	NR	NR	NR
OVA'S	BKD	BKD	BKD	BKD	BKD	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	NA	BDL	NA	BDL
Carbon tetrachloride	NA	BDL	NA	BDL	NA	BDL
Methylene chloride	NA	BDL	NA	BDL	NA	BDL
Tetrachloroethylene	NA	BDL	NA	BDL	NA	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	14	BDL	16	21	9.5	12
Copper	13	BDL	12	15	6.2	13
Lead	BDL	BDL	13	BDL	BDL	BDL
Zinc	47	24	46	52	26	47

Arsenic ug/g

Mercury (ug/g)

Arsenic ug/g	BDL	BDL	BDL	BDL	BDL	BDL
Mercury (ug/g)	BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 13 of 15.

Depth (feet)	Boring 22		Boring 23		Boring 24	
	0-1	4-5	0-1	4-5	0-1	4-5
Geologic Material	(Rubble) Sand and Gravel Fine Sand Silt	Fine Sand and Silt	(Rubble) Sand and Gravel Silty/Clayey Fine Sand	Sandy Clay	(Rubble) Sand, Silt and Gravel/ Very Fine Sandy Silt	Fine Sandy Clay
Percent FinesVO	50	50	40	70	60	60

AIR MONITORING

Volatile Organic Readings (ppm)

HNUS	NR	NR	NR	NR	NR	NR
OVAS	BKD	BKD	BKD	BKD	BKD	1.0-3.0

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	NA	BDL	NA	BDL
Carbon tetrachloride	NA	BDL	NA	BDL	NA	BDL
Methylene chloride	NA	BDL	NA	BDL	NA	BDL
Tetrachloroethylene	NA	BDL	NA	BDL	NA	BDL

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	11	9.9	BDL	7.9	16
Copper	BDL	6.6	6.0	8.4	9.6	14
Lead	BDL	BDL	BDL	14	15	24
Zinc	28	31	32	37	38	61

Arsenic (ug/g)

Arsenic	BDL	BDL	BDL	BDL	BDL	BDL
---------	-----	-----	-----	-----	-----	-----

Mercury (ug/g)

Mercury	BDL	BDL	BDL	BDL	BDL	0.070
---------	-----	-----	-----	-----	-----	-------

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

Table 3-4-2. Results of Phase I Field Study. Page 14 of 15.

Depth (feet) Geologic Material	Boring 25		Boring 26		Boring 27		Boring 35*	
	0-1	4-5	0-1	4-5	0-1	4-5	0-1	4-5
	Very Fine Sandy Silt/ Clay	Fine Sandy Silt/Clay	0-1 (Rubble) Sand and Gravel/Very Fine Sandy Silt	4-5 Very Fine Sandy Silt	0-1 (Rubble) Sand and Gravel	4-5 Silty Fine to Medium Sand	0-1 Gravelly Sand	4-5 Gravelly Sand
Percent Fines ^{VO}	75	60	0/75	60	-	40	5	5

AIR MONITORING

Volatile Organic Readings (ppm)

HNUS	NR	NR	NR	NR	NR	NR	NR
OVA S	BKD	BKD	BKD	BKD	BKD	BKD	BKD

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	BDL	NA	BDL	NA	0.6	NA
Carbon tetrachloride	NA	BDL	NA	BDL	NA	0.3	NA
Methylene chloride	NA	BDL	NA	BDL	NA	BDL	NA
Tetrachloroethylene	NA	BDL	NA	BDL	NA	0.4	NA

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	17	16	10	13	BDL	12	BDL
Copper	19	14	13	13	9.3	12	BDL
Lead	19	12	22	14	BDL	BDL	BDL
Zinc	100	56	55	49	22	40	16

Arsenic (ug/g)

Mercury (ug/g)

Arsenic	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mercury	BDL	BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

BKD - Background

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Investigated as part of Section 3-UNC, Task 15

Table 3-4-2. Results of Phase I Field Study. Page 15 of 15.

Depth (feet) Geologic Material	Boring 45*			Boring 48*		Boring 50*	
	0-1 Silty Medium Sand	4-5 Medium Coarse Sand	0-1 Medium Sand	4-5 Clayey Sand	0-1 Medium Sand	4-5 Dirty Poorly Sorted Sand	10
Percent FinesVO	10	0	5	20	5		

AIR MONITORING

Volatile Organic Readings (ppm)

HNU'S	NR	NR	NR	NR	1.0	1.0
OVA'S	BKD	BKD	15	15	NR	NR

SOIL CHEMISTRY

Volatiles (ug/g)

Benzene	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA
Methylene chloride	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA

Semivolatiles (ug/g)

None detected

Dibromochloropropane (ug/g)

None detected

ICP Metals (ug/g)

Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	BDL	BDL	BDL	BDL	BDL
Copper	BDL	BDL	BDL	BDL	BDL	BDL
Lead	29	33	33	33	16	16
Zinc	BDL	BDL	BDL	BDL	BDL	BDL

Arsenic ug/g)

Mercury (ug/g)

BDL - Below detection limit

BKD - Background

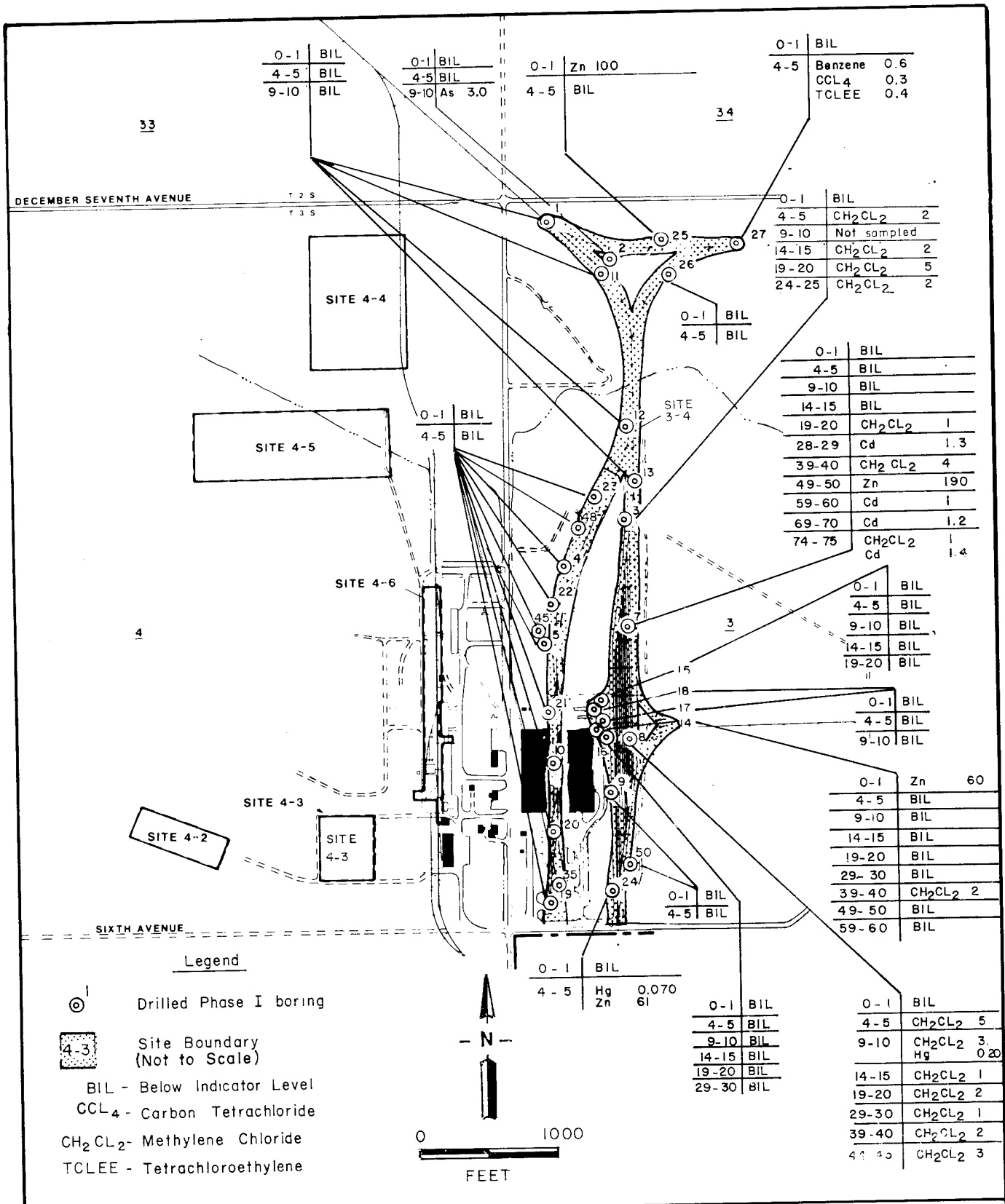
NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA, and benzene for HNU; reading has been adjusted to account for background level

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Investigated as part of Section 3-UNC, Task 15



Prepared for:
 Program Manager's Office for
 Rocky Mountain Arsenal Cleanup
 Aberdeen Proving Ground, Maryland

FIGURE 3 - 4 - 6a
 Analytes Detected Within or Above
 Indicator Levels
 Rocky Mountain Arsenal, Task 7
 Prepared by Ebasco Services Incorporated

Drafted : 11. 11. 86

Table 3-4-3. Tentative Identification of Nontarget Compounds.

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
1	0-1	605	1.1	004	BLU	9-hexadecenoic acid	D
		605	0.7	004	BLU	hexadecanoic acid	D
		627	0.5	004	BLU	hexanedioic acid, dioctyl ester	D
		639	0.7	004	BLU	dioctyl phthalate	F, C
	4-5	605	0.9	002	BLV	hexadecanoic acid	K
		619	0.5	005	BLU	unknown alkane, C-23	D
		639	9.0	005	BLU	dioctyl phthalate	A, F, C
		605	0.9	003	BLV	hexadecanoic acid	K
		610	2.0	006	BLU	nonanedioic acid, dibutyl ester	D
		627	4.3	006	BLU	hexanedioic acid, dioctyl ester	D
2	9-10	637	0.9	006	BLU	unknown alcohol	A
		639	1.3	006	BLU	dioctyl phthalate	F, C
		610	2.0	005	BMA	fluoranthene or pyrene	A
		614	0.3	005	BMA	hexanedioic acid, dioctyl ester	A
		627	0.8	005	BMA	hexanedioic acid, dioctyl ester	D
		606		006	BLV		K
	0-1	606		006	BMA		K
		607		007	BLV		K
		607		007	BMA		K
		602		002	ANX		K
3	0-1			002	ANX		K
	4-5			002	ANW		K
				003	ANX		K

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
3	14-15			002	AOG		K
				002	AOH		K
	19-20	616	1.0	003	AOG	nonanedioic acid, dibutyl ester	K
				003	AOH		D
24-25				004	AOG		K
	605	0.8	004	AOH	bis (2-methyl propyl) phthalate	F, C	
	610	0.5	004	AOH	hexanedioic acid, a phthalate not identified	A	
4	0-1	575	0.4	004	BMQ	propanoic acid, 2-methyl-, 2,2-dimethyl-1-(2-hydroxy-1-methyl) propyl ester	
		576	0.6	004	BMQ	propanoic acid, 2-methyl-, 3-hydroxy-2,4,4-trimethylpentyl ester	
	627	0.8	004	BMQ	hexanedioic acid, dioctyl ester	D	
	639	0.6	004	BMQ	dioctyl phthalate	F, C	
4-5		605	0.3	008	BMO	hexadecanoic acid	K
				005	BMQ		D
5	0-1	605	0.4	006	BMQ	hexadecanoic acid	D
		636	0.4	006	BMQ	aldehyde, C-18	A
7	0-1	627	0.8	009	BMO	hexanedioic acid, dioctyl ester	K
		639	2.1	007	BMQ	dioctyl phthalate	D
				002	AON		F, C
	4-5			002	AOK		K
				003	AON		K

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
7	9-10			003	AOK		K
				004	AON		K
	14-15	616	2.0	004	AOK		K
				005	AON	nonanedioic acid, dibutyl ester	D
	19-20			005	AOK		K
				006	AON		K
28-29	616	1.0	002	AOR		K	
			002	AOS	nonanedioic acid, dibutyl ester	D	
39-40			003	AOR		K	
			003	AOS		K	
49-50	616	1.0	004	AOR		K	
			004	AOS	nonanedioic acid, dibutyl ester	D	
59-60	616	0.5	002	APF		K	
			002	APB	nonanedioic acid, dibutyl ester	D	
69-70			003	APF		K	
			003	APB	dibutyl phthalate	F, C	
			003	APB	nonanedioic acid, dibutyl ester	D	
			003	APB		A	
74-75			004	APF		K	
			004	APB		K	
8	0-1		002	AMV		K	
			002	AMU		K	
4-5	631	0.8	003	AMV		A	
			003	AMV		A	
9-10	616	0.5	003	AMU		K	
			004	AMV	nonanedioic acid, dibutyl ester	D	

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments	
8	14-15	616	1.0	004	AMU	nonanedioic acid, dibutyl ester	K	
				005	AMV		D	
	19-20	616	0.6	002	ANG	nonanedioic acid, dibutyl ester	K	
				002	ANH		D	
	29-30	616	1.0	003	ANG	nonanedioic acid, dibutyl ester	K	
				003	ANH		D	
				003	ANH		A	
	39-40	631	2.0	004	ANG	nonanedioic acid, dibutyl ester	K	
				004	ANH		D	
				004	ANH		A	
	44-45	616	0.5	005	ANG	nonanedioic acid, dibutyl ester	K	
				005	ANH		D	
9	0-1	626	0.5	008	BMQ	hexanedioic acid, dioctyl ester	D	
				008	BMQ		F, C	
	4-5	605	0.4	002	BMZ	hexadecanoic acid	K	
				009	BMQ		D	
10	0-1	605	0.4	002	BMQ	hexadecanoic acid	K	
				002	BMQ		K	
	4-5	605	1.0	007	BMO	hexadecanoic acid	K	
				003	BMQ		D	
				003	BMQ		D	
				003	BMQ		D	
				003	BMQ		D	
				003	BMQ		A	
	11	0-1	628	0.5	003	BMQ	dioctyl phthalate	C
					002	BMA	1-isocyanonaphthalene	

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 GT - Greater than
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
11	4-5	627	7.5	004	BLV		K
		639	3.0	003	BMA	hexanedioic acid, dioctyl ester	D
				003	BMA	dioctyl phthalate	F, C
12	9-10	610	1.3	005	BLV		K
		627	1.2	004	BMA	nonanedioic acid, dibutyl ester	D
				004	BMA	hexanedioic acid, dioctyl ester	D
				004	BMA	dioctyl phthalate	F, C
008		008	BMA		K		
13	0-1	636	1.3	008	BLV		K
				009	BMA		K
13	0-1	637	0.5	002	BLZ		K
				010	BMA	unknown alcohol or alkene, GT C-26	A
				002	BMB		A
				002	BMB	fluoranthene	
				002	BMB	pyrene	
				002	BMB		A
13	4-5	637	0.6	003	BLZ		K
				003	BMB		A
13	9-10	637	0.6	004	BLZ		K
				004	BMB		K

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 GT - Greater than
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
14	0-1	577	1.0	002	BLL	an isomer of trichlorobenzene	A
		578	1.0	002	BLL	unknown with 3 chlorines	D
		609	0.2	002	BLL	hexadecanoic acid	D
4-5	4-5	580	0.3	002	BME	2-butenedioic acid, bis-	K
				003	BLL	(2-methylpropyl) ester	D
		609	0.3	003	BLL	hexadecanoic acid	D
9-10	9-10	636	0.3	003	BLL	C-18 aldehyde	A
		609	0.3	003	BME	hexadecanoic acid	K
		615	1.0	004	BLL	nonanedioic acid, dibutyl ester	D
14-15	14-15	619	0.1	004	BLL	hexanedioic acid, mono-	A
		630	0.3	004	BLL	(2-ethylhexyl) ester	D
		636	0.4	004	BLL	C-18 alkene	A
19-20	19-20	609	0.2	004	BME	hexadecanoic acid plus	K
				005	BLL	a phthalate	C, D, F
		615	0.8	005	BLL	nonanedioic acid, dibutyl ester	D
19-20	19-20	619	0.1	005	BLL	hexanedioic acid, mono-	A
		630	0.2	005	BLL	(2-ethylhexyl) ester	D
		637	0.2	005	BLL	C-17 alcohol	D
19-20	19-20	609	0.3	005	BME	hexadecanoic acid plus	K
				006	BLL	a phthalate	C, D, F
		615	0.6	006	BLL	nonanedioic acid, dibutyl ester	D
19-20	19-20	619	0.2	006	BLL		A
		636	0.3	006	BLL	C-17 alcohol	D

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
14	29-30	610	0.3	006	BME	hexadecanoic acid plus	K
		615	0.9	007	BLL	a phthalate	C, D, F
	39-40	637	0.2	007	BLL	nonanedioic acid, dibutyl ester	D
		610	0.3	007	BLL	hexadecanoic acid plus	A
	49-50	615	0.5	008	BLL	a phthalate	K
		637	0.2	008	BLL	nonanedioic acid, dibutyl ester	C, D, F
15	59-60	610	0.3	008	BME	hexadecanoic acid plus	K
		615	0.5	009	BLL	a phthalate	C, D, F
	0-1	619	0.1	009	BLL	nonanedioic acid, dibutyl ester	D
		610	1.0	002	BMH	nonanedioic acid, dibutyl ester	A
	59-60	617	0.5	002	BMG	alkane, C-22	K
		639	1.0	002	BMG	hexanedioic acid, dioctyl ester	D
0-1	605	0.6	005	BMI	dioctyl phthalate	F, C	
	605	0.7	005	BMI	9-hexadecenoic acid	D	
	627	2.5	005	BMI	hexadecanoic acid	D	
	639	0.8	005	BMI	hexanedioic acid, dioctyl ester	D	

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
15	4-5	605	0.4	003	BMJ	hexadecanoic acid	K
		627	1.3	006	BMI	hexanedioic acid, dioctyl ester	D
		639	0.3	006	BMI	dioctyl phthalate	F, C
	9-10	605	0.9	004	BMJ	hexadecanoic acid	K
		610	2.7	007	BMI	nonanedioic acid, dibutyl ester	D
		627	1.1	007	BMI	hexanedioic acid, dioctyl ester	
639		1.0	007	BMI	dioctyl phthalate	F, C	
14-15	605	0.4	005	BMJ	hexadecanoic acid	K	
	610	0.9	009	BMG	nonanedioic acid, dibutyl ester	D	
	639	0.6	006	BMJ	nonanedioic acid, dibutyl ester	K	
19-20	610	1.7	010	BMG	unknown phthalate	A, F, C	
	627	0.8	003	BMG	hexanedioic acid, dioctyl ester	F, C	
	639	6.0	003	BMG	dioctyl phthalate		
4-5	602	0.7	003	BMH	unknown phthalate, possibly dibutyl	K	
	605	0.6	004	BMG	hexadecanoic acid	A, F, C	
0-1	627	1.0	004	BMG	hexanedioic acid, dioctyl ester	D	
	639	0.7	004	BMG	dioctyl phthalate	F, C	

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
16	9-10	605	0.5	004	BMH	hexadecanoic acid	K
		627	3.0	005	BMG	hexanedioic acid, dioctyl ester	D
		639	1.0	005	BMG	unknown, possibly dioctyl phthalate	A
				006	BMG	nonanedioic acid, dibutyl ester	K
17	14-15	610	0.7	006	BMG	unknown, possibly dioctyl phthalate	A
		639	0.7	006	BMG	nonanedioic acid, dibutyl ester	K
				007	BMG	hexanedioic acid, dioctyl ester	K
17	19-20	610	0.7	006	BMH	nonanedioic acid, dibutyl ester	K
				007	BMG	hexanedioic acid, dioctyl ester	K
		639	0.6	007	BMG	nonanedioic acid, dibutyl ester	K
				008	BMG	nonanedioic acid, dibutyl ester	K
17	0-1	627	4.8	002	BMI	hexanedioic acid, dioctyl ester	F, C
		639	2.0	002	BMI	dioctyl phthalate	F, C
				008	BMH	hexadecanoic acid	K
				003	BMI	hexanedioic acid, dioctyl ester	D
17	4-5	605	0.4	003	BMI	hexanedioic acid, dioctyl ester	F, C
				003	BMI	dioctyl phthalate	F, C
		627	1.6	003	BMI	hexadecanoic acid	K
				003	BMI	hexanedioic acid, dioctyl ester	D
17	9-10	605	1.0	002	BMJ	hexadecanoic acid	K
				004	BMI	hexanedioic acid, dioctyl ester	D
		627	0.9	004	BMI	hexanedioic acid, dioctyl ester	D

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 * - Values reported are blank corrected

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Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
18	0-1	602	0.5	008	BMI	dibutyl phthalate	F, C
		605	0.4	008	BMI	hexadecanoic acid	D
		627	2.2	008	BMI	hexanedioic acid, dioctyl ester	
	4-5	627	0.8	007	BMJ	hexanedioic acid, dioctyl ester	K
				009	BMI		
19	9-10	605	0.5	008	BMJ	hexadecanoic acid	K
				010	BMI	nonanedioic acid, dibutyl ester	D
				010	BMI	hexadecanoic acid, dibutyl ester	
				010	BMI	unknown cyclic alkane	A
				010	BMI		
				002	BMP		K
20	4-5	532	0.2	002	BMO	2-methyl cyclopentanol	K
				003	BMP	nonanedioic acid, dibutyl ester	
				003	BMP		
21	0-1	532	0.3	004	BMP	2-methyl cyclopentanol	K
				003	BMO		
				005	BMP	2-methyl cyclopentanol	
				005	BMP	nonanedioic acid, dibutyl ester	
				005	BMP	hexanedioic acid, mono-(2-ethylhexyl) ester	
	0-1	629	0.3	006	BMP		K

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
21	4-5	532	0.2	004	BMO	2-methyl cyclopentanol nonanedioic acid, dibutyl ester hexanedioic acid, mono- (2-ethylhexyl) ester	K
				007	BMP		
				007	BMP		
				007	BMP		
22	0-1	531	0.4	008	BMP	2-methyl cyclopentanol	
				005	BMO		K
				009	BMP		K
23	0-1	605	0.5	010	BMP		K
				006	BMO		K
24	0-1	636	0.5	011	BMP		K
				010	BMQ	hexadecanoic acid	D
25	0-1	639	0.5	010	BMQ	unknown alkene or alcohol, GT C-20	A
				002	BMY	dioctyl phthalate	F, C
				002	BMY	hexadecanoic acid	K
				002	BMY	unknown alkane, C-22 unknown alcohol or alkene, GT C-20	D A A
25	0-1	636	0.4	002	BMY	dioctyl phthalate	F, C
				003	BMY	hexadecanoic acid	D
				003	BMY	dioctyl phthalate	F, C
				004	BMZ	unknown aldehyde, C-18	K
25	4-5	636	0.4	004	BMY		A

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 GT - Greater than
 K - None detected
 * - Values reported are blank corrected

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
26	0-1	610	0.3	005	BMV	unknown polycyclic hydrocarbon, GT C-20	A
		636	0.8	005	BMV	unknown alcohol or alkene, GT C-20	A
		639	0.5	005	BMV	diethyl phthalate	F, C
		652	0.4	005	BMV	unknown alkane, GT C-26	A
		605	0.8	005	BMZ	hexadecanoic acid	K
		619	0.7	006	BMV	unknown alkane, C-22	D
27	0-1	636	0.6	006	BMV	unknown alcohol or alkene, GT C-20	A
		639	9.4	006	BMV	diethyl phthalate	F, C
		605	0.5	007	BMV	hexadecanoic acid	D
		610	0.4	007	BMV	nonanedioic acid, dibutyl ester	
		614	0.4	007	BMV	fluoranthene or pyrene	A
		636	1.0	007	BMV	unknown cyclic alkane	F, C
35**	0-1/4-5 composite	639	3.6	007	BMV	diethyl phthalate	
		121	4.7	006	BMZ	2,2,4-trimethyl pentane	E
		605	0.6	008	BMV	hexadecanoic acid	D
		636	0.6	008	BMV	unknown aldehyde, C-18	A
		638	4.1	008	BMV	diethyl phthalate	F, C
		635	0.2	004	BKV	alkene, C-18	
45**	0-1/4-5 composite	609	0.4	009	BQR	hexadecanoic acid and an Unidentified phthalate	C, D, F

A - No positive identification
 C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 GT - Greater than
 K - None detected

* - Values reported are blank corrected
 ** - Borings 35, 45, 48 and 50 were investigated as part of Section 3-UNC, Task 15

Table 3-4-3. Tentative Identification of Nontarget Compounds (Continued).

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)*	Sample Number	Lot	Best-fit Identification	Comments
48**	0-1/4-5 composite	528	0.1	008	BQR	2-methyl cyclopentanol	
		529	0.1	008	BQR	2-methyl cyclopentanone	
		566	0.4	008	BQR	3,7-dimethyl-2, 6-octadien-1-01	
		609	0.3	008	BQR	hexadecanoic acid and an unidentified phthalate	C, D, F
50**	0-1/4-5 composite	619	2.0	008	BQR	alkene, C-18	
		595	0.4	006	BRM	unknown alkane, C-18	
		630	0.7	006	BRM	dioctyl ester, hexanedioic acid	D

C - Plasticizer
 D - Derived from natural products
 F - Low concentration
 * - Values reported are blank corrected
 ** - Borings 35, 45, 48 and 50 were investigated as part of Section 3-UNC, Task 15

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assigned to more than one compound. Therefore, Table 3-4-3 provides only a general indication of additional compounds that may be present. Nontarget compounds tentatively identified at Site 3-4 include phthalates (ubiquitous plasticizers); organic acids; unknown alcohols, aldehydes, alkenes, alkanes, and a cyclic alkane; fluoranthene; pyrene; 2,2,4-trimethyl pentane; 1-isocyano-naphthalene; an isomer of trichlorobenzenamine; 2-methyl cyclopentanol; an unknown polycyclic hydrocarbon; and an unknown with three chlorines. All nontarget compounds were detected at low concentrations.

3.2.5 Phase I Contamination Assessment

Phase I samples from Site 3-4 had concentrations of benzene, carbon tetrachloride, methylene chloride, tetrachloroethylene, cadmium, zinc, arsenic, and mercury within or above their indicator levels.

Benzene, carbon tetrachloride, and tetrachloroethylene were detected in low concentrations in one sample from Boring 27 (4-5 ft interval). This boring was not located within the railyard itself. Methylene chloride was detected in 15 samples from 4 borings (Borings 3, 7, 8, and 14) in concentrations ranging from 1 to 5 ug/g. These data do not show a concentration gradient from the surface to depth as might be expected in the fairly homogeneous sands of this site if a surface spill had occurred. Also as discussed in Section 1.3, methylene chloride has not been detected in groundwater wells in the vicinity of the site. In addition, low concentrations of methylene chloride were detected, although below the certified reporting limit, in every laboratory method blank associated with a sample where methylene chloride was detected. Finally, a history search for compounds other than dibromochloropropane that may have been present at the site has been initiated. Consequently, methylene chloride will not be investigated in the Phase II program. The results of the history search will provide the necessary information to determine if an investigation for methylene chloride is warranted and if so, to design an effective investigation for methylene chloride. The necessity of that investigation will be determined by the feasibility study group. The concentrations of arsenic and cadmium were within their indicator ranges and were consistent with the natural levels that

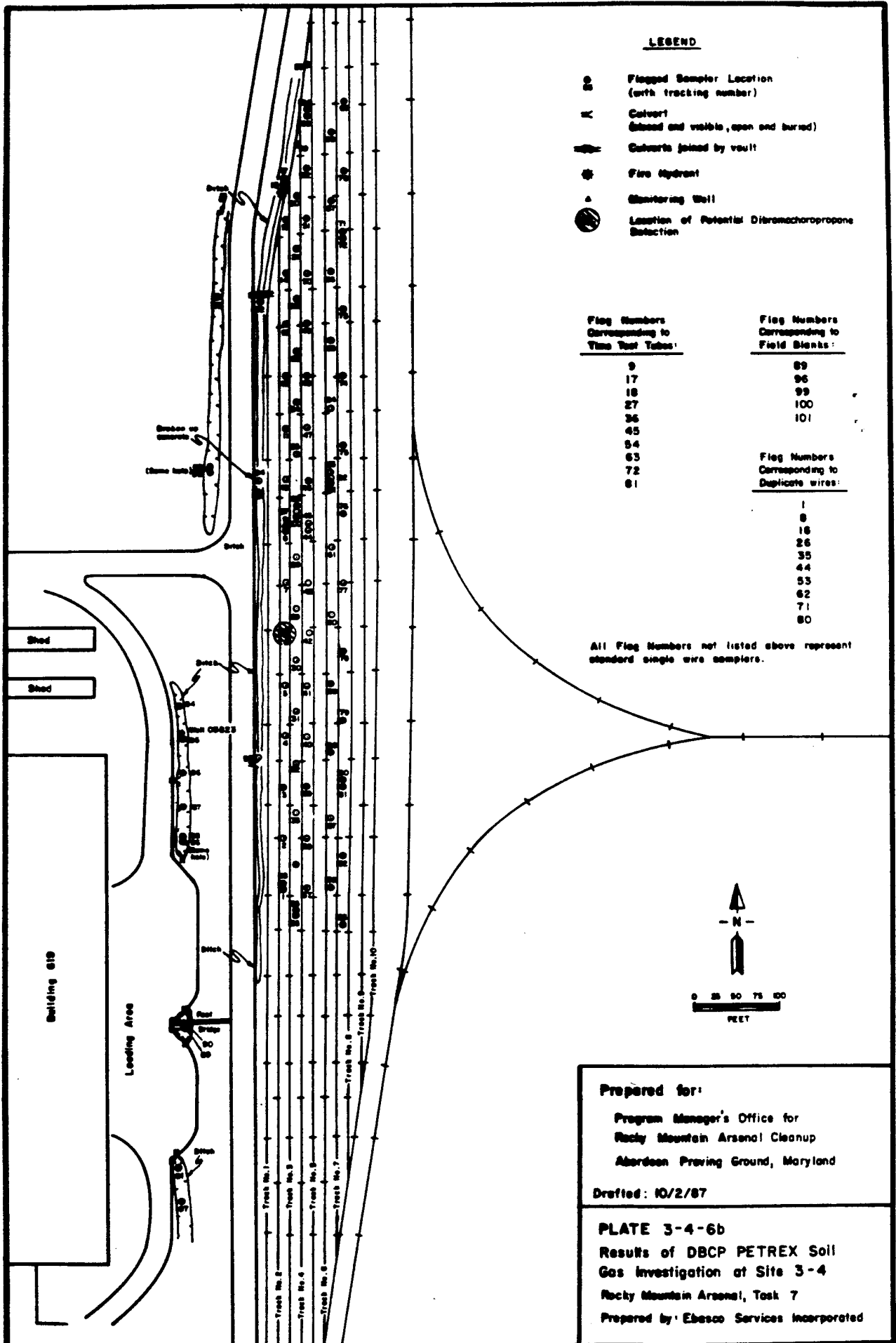
could be expected in the soils being investigated. The concentrations of mercury and zinc above their indicator ranges are associated with clay materials. An increase in metals concentrations in zones of clay accumulation is considered consistent with natural conditions.

The semivolatile method, although not certified for volatile compounds, has been shown to be capable of detecting toluene, chlorobenzene, ethylbenzene, and xylenes in the nontarget fraction. The absence of these compounds in the nontarget results for this site is an indication that there is no contamination present from these compounds.

Some of the nontarget compounds tentatively identified at Site 3-4, such as the phthalates, are ubiquitous compounds. Found in low concentrations and at concentrations of less than 10 parts per million (ppm), such compounds are not considered to be significant. However, one phthalate was identified tentatively in Boring 17 at 14.4 ppm and in Boring 10 at 12 ppm. The organic acids and alcohols were derived from natural products or could not be identified positively, and at the low concentrations detected at Site 3-4, are not considered to be indicative of contamination. The tentatively identified nontarget compounds fluoranthene and pyrene are polycyclic aromatic hydrocarbons, and are products of incomplete combustion, may be related to isolated fuel spills, or may be petroleum products associated with railyard activities. A volatile nontarget compound, 2,2,4-trimethyl pentane, was detected at 4.7 ppm in the 4 to 5 ft interval of Boring 27. A number of target organic compounds were also detected in this interval of Boring 27. In the proposed Phase II investigation for the target analytes detected in this sample, the analytical methods used will be capable of detecting 2,2,4-trimethyl pentane, should it be present. Another nontarget compound was identified tentatively as an isomer of trichlorobenzene in Boring 14 (0-1 ft interval). This compound may be associated with the manufacture of Shell pesticides and warrants further study. An unknown semivolatile compound with three chlorines also was identified tentatively at a low concentration in Boring 14 and will be investigated in the Phase II program. The remainder of the nontarget compounds were not identified positively and/or were found in low concentrations.

Site 3-4 originally was investigated as a contamination source due to the presence of dibromochloropropane in the groundwater downgradient from the site. The designation of this site as a dibromochloropropane source was supported by 1982 data showing the presence of this compound in the surface water, groundwater, and selected soil samples (Geraghty & Miller, 1982/RIC 81342R06). However, analysis of soil samples collected during the Phase I program did not indicate the presence of dibromochloropropane in 91 samples from any of the 26 borings at the site as well as the four borings from the Section 3 nonsource area investigation. The detection limit for dibromochloropropane analyses ranges from 0.005 to 0.014 ug/g. Despite the fact that dibromochloropropane was not detected in any of the 26 borings at the site during Phase I, the historic information for the site and historic and current groundwater quality data seem to indicate a source of dibromochloropropane in the rail classification yard. Organic compounds were detected at levels just above their detection limits in Boring 27 north of the railyard; however, the site history does not indicate any use, spillage, or disposal of these compounds in this area. Aerial photos from 1948 to 1980 did not show any unusual stains or spills in the vicinity of the borings in which these organic compounds were detected. Additionally, the four stained areas within the Site 3-4 boundaries investigated under the Phase I Section 3 nonsource area program did not detect elevated concentrations of organic or inorganic contaminants. The lateral and vertical extents of those organic compounds detected in the Site 3-4 Phase I program are uncertain. Further sampling designed to confirm the presence of the unexpected analytes in these areas, as well as the tentatively identified nontarget chlorinated unknowns and the nontarget compound trichlorobenzene in the southern portion of the site, is recommended.

The results of the PETREX soil gas field program (Figure 3-4-6b) showed that one sample location (Sample 6) had a detectable level of dibromochloropropane. This sampler was located within 100 to 200 ft from where Shell and Geraghty and Miller studies detected the compound (Geraghty & Miller, 1982/RIC 81342R06; Shepherd, 1981). Although the PETREX soil gas method does not report results in values of ppm in soil, the instrument response tended toward the upper end of quantifiable limits, indicating that the dibromochloropropane



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PLATE 3-4-6b
 Results of DBCP PETREX Soil
 Gas Investigation at Site 3-4
 Rocky Mountain Arsenal, Task 7
 Prepared by: Ebasco Services Incorporated

detected was well above the method detection limit. In approximately one-third of the remaining samples, there were instrument responses at the mass-to-energy ratios where dibromochloropropane would be expected to be detected. An analysis of the ratios of the different masses detected in each of these samples indicated that dibromochloropropane was not one of the primary analytes present. PETREX was not able to identify the nondibromochloropropane compounds. Since compounds other than dibromochloropropane were present and interfering with the analysis of these samples, the detection limits for these samples were higher than the samples where no interfering compounds were detected. In no sample was the instrument response for nondibromochloropropane compounds higher than in the instrument response for dibromochloropropane in Sample 6.

3.3 PHASE II SURVEY

Although the Phase I analyses of soil samples did not detect dibromochloropropane, a soil gas investigation for this compound was conducted and indicated a potential location of dibromochloropropane contamination. A Phase II soil sampling program is proposed to confirm the detection and define the extent of the dibromochloropropane contamination detected by the PETREX soil gas samplers at the location of Sample 6. Given that the Phase I program at Site 3-4 revealed detectable levels of organic compounds, a Phase II program is proposed to further assess the extent of these compounds. The Phase II sampling program will also address other tentatively identified nontarget organic compounds detected in the Phase I program. The objectives of the Phase II program at Site 3-4 are to:

- o Determine the location and areal extent of potential dibromochloropropane contamination near PETREX Sample 6;
- o Confirm the presence and define the extent of benzene, carbon tetrachloride, tetrachloroethylene, and the nontarget compound 2,2,4-trimethyl pentane and fluoranthrene/pyrene in the vicinity of Boring 27; and

- o Confirm the presence of the isomer of trichlorobenzeneamine and unknown with three chlorines in Boring 14.

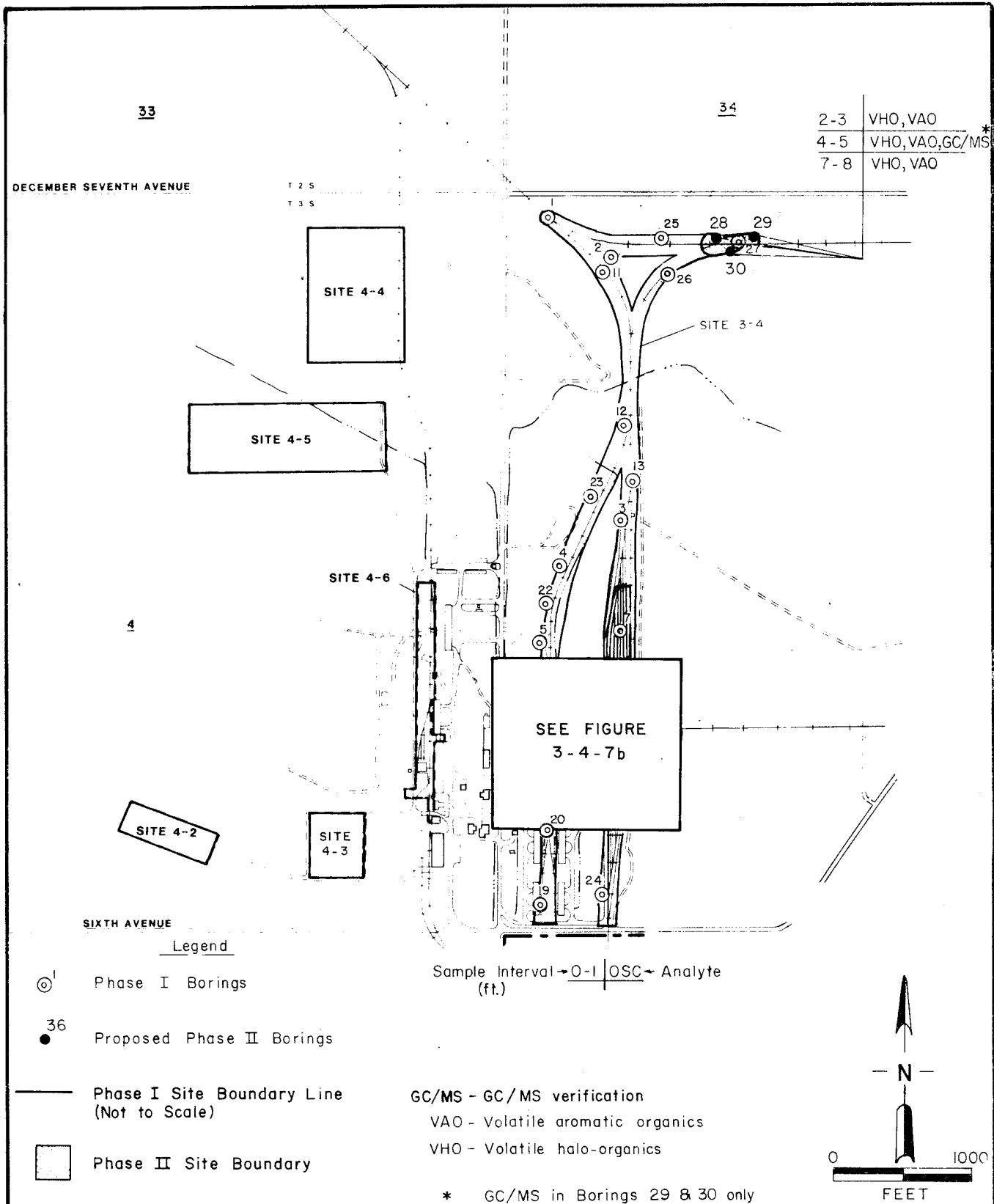
The Phase II boundaries of Site 3-4 have been revised to include only the northern portion of the site, near Boring 27, and the area of the rail classification yard where dibromochloropropane spills were suspected to have occurred (Shepherd, 1981) as shown in Figure 3-4-7a.

Ten additional borings, yielding 23 samples, are proposed for the Phase II program at Site 3-4. The locations of borings and the proposed sampling plan for Phase II are illustrated in Figures 3-4-7a and 3-4-7b. Four borings, one at the location where dibromochloropropane was detected in the PETREX study and 3 immediately adjacent (approximately 10 ft away) from the detected location are proposed. These borings will be drilled to 5 ft and sampled at the 0 to 1 and 4 to 5 ft intervals. Samples collected will be analyzed for dibromochloropropane only. Each of the other 6 borings will be situated around each contaminated Phase I boring, at a distance of 20 ft. These borings will attempt to confirm the presence and verify the extent of contamination by numerous organic target compounds and tentatively identified nontarget compounds. The number of borings and samples to be taken at specific depths during Phase II are tabulated below.

<u>No. of borings</u>	<u>Depth (ft)</u>	<u>No. of Samples</u>
3	3	6
4	5	8
3	8	9

The number of soil samples to be tested by each analytical method is listed below.

<u>Analytical Method</u>	<u>No. of Samples</u>
Volatile halogenated organics (VHO)	9
Volatile aromatic organics (VAO)	9
GC/MS Verification (GC/MS)	2
Semivolatile Organics (SVO)	6
Dibromochloropropane (DBCP)	8



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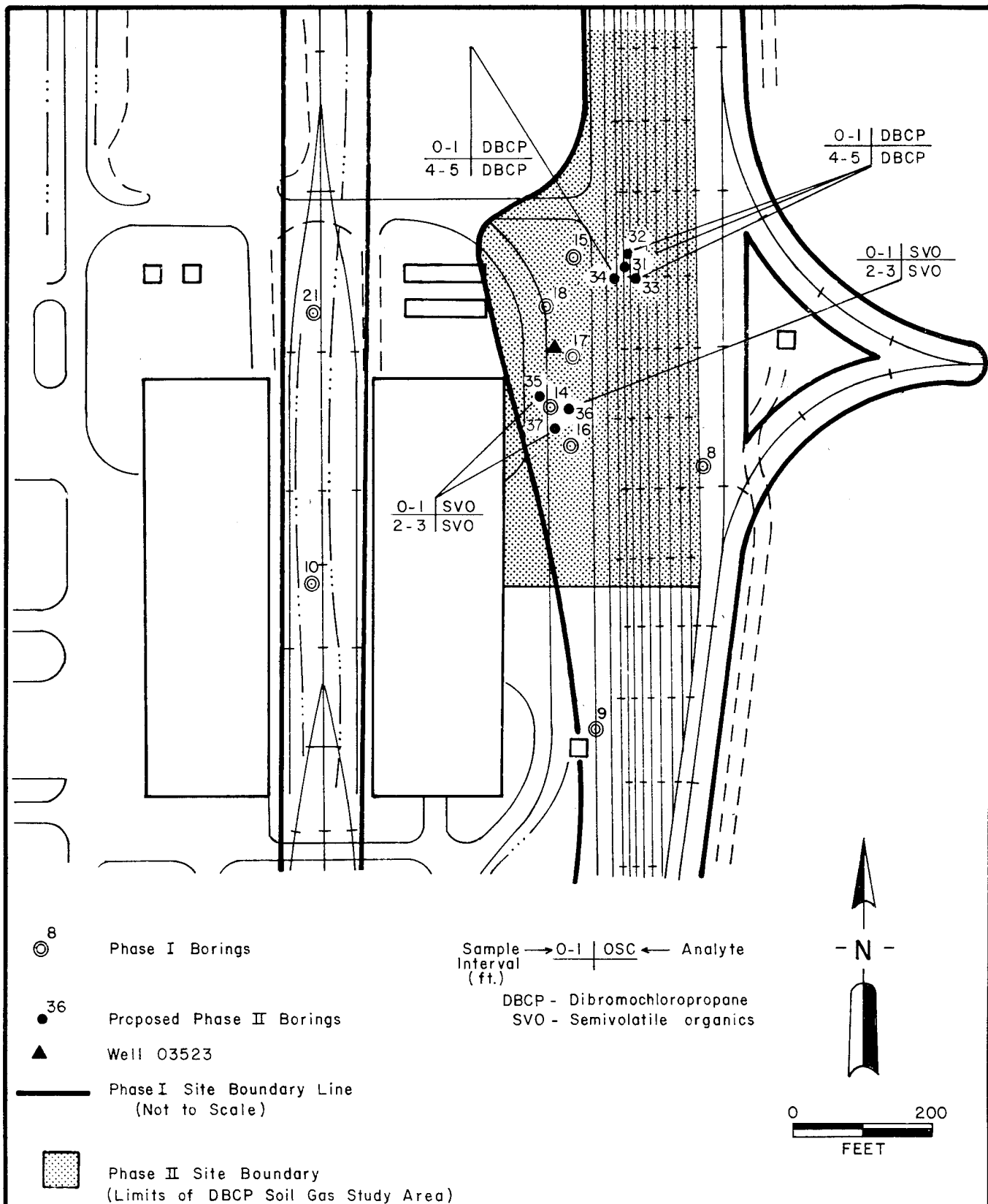
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FIGURE 3-4-7a

Proposed Phase II Borings and Sampling Plan

Rocky Mountain Arsenal, Task 7

Prepared by: Ebasco Services Incorporated



Prepared for:
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 Aberdeen Proving Ground, Maryland

FIGURE 3-4-7b
 Proposed Phase II Borings and
 Sampling Plan
 Rocky Mountain Arsenal, Task 7
 Prepared by: Ebasco Services Incorporated

The Phase II analytical methods are designed to be analyte specific, use GC techniques with specific detectors, and have detection limits much lower than the Phase I methods. However, because the GC/MS scan is considered to offer a greater level of confidence in compound identification, 10 percent of the samples submitted for Phase II organic analyses will be subject to GC/MS verification. These samples have been chosen and are designated on Figure 3-4-7a. The samples have been chosen where Phase I results indicate high enough concentrations of organic compounds to be detected by GC/MS.

The draft final version of this report was sent to the Colorado Department of Health (CDH), Shell Oil Company, and the U.S. Environmental Protection Agency on December 29, 1987. Comments were received from Shell on February 2, 1988. EPA comments are an integral part of the report review process and previously have been incorporated into the report. No comments had been received from CDH as of February 22, 1988, well beyond the end of the one month comment period. The comments received have been considered in the preparation of this final report. Comments and responses are provided in appendix 3-4-C.

3.4 QUANTITY OF POTENTIALLY CONTAMINATED SOIL

Site 3-4 originally was considered to be a contaminated site. The following estimates of the extent of potentially contaminated soil originally were calculated in RMACCPMT (1984/RIC 83034R01):

Estimated Areal Extent = 28,800 ft²

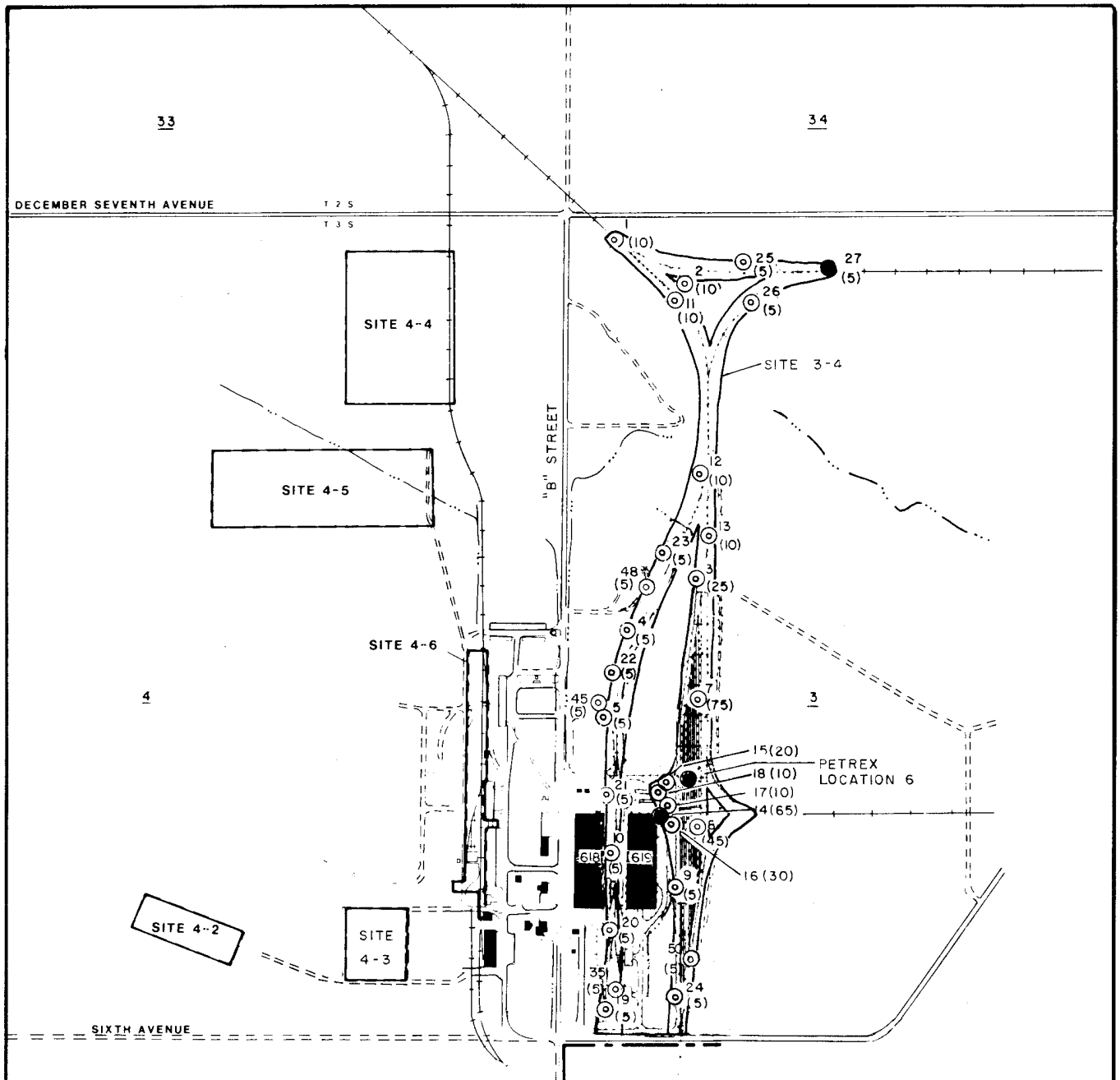
Estimated Vertical Extent = 15 ft

Estimated Volume = 16,000 cubic yards (yd³)

Based on the results of the Phase I and PETREX soil gas investigation, an estimate of 5,000 yds³ of potentially contaminated soil has been made. Analytes were detected above their indicator levels in Boring 27, and a potentially significant nontarget compound tentatively was identified in Boring 14. Dibromochloropropane tentatively was identified at PETREX sample location 6 at a depth of 6 to 12 inches. Because no general pattern of contamination can be observed, because there is no evidence of spills or

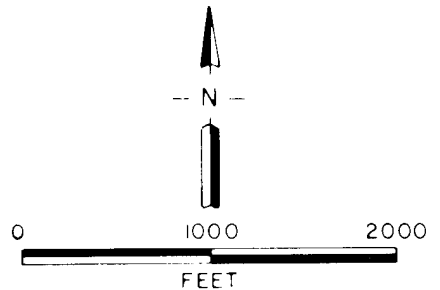
disposal of compounds other than dibromochloropropane in this area, and because each potentially contaminated boring is surrounded either by borings with no analytes above their indicator levels or by the present site boundaries, volumes were calculated by assuming that soil within a 50 ft radius of the hits potentially is contaminated. As the analytes in Phase I Boring 14 and PETREX sample location 6 were detected at the 0 to 1 ft interval, the potentially contaminated area will be assumed to extend vertically to the top of the next regular sample interval at 4 ft. A cylinder with a 50 ft radius and depth of 4 ft has a volume of 1,200 yds³. As the analytes in Boring 27 were detected at the 4 to 5 ft interval, the potentially contaminated area will be assumed to extend vertically to the top of the next regular sample interval at 9 ft. A cylinder with a 50 ft radius and depth of 9 ft has a volume of 2,600 yds³. Combining the cylinders of potential contamination around the three borings and the one PETREX sample location, the total estimated volume of potentially contaminated soil is 5,000 yds³ (Figure 3-4-8).

Results from the Phase I survey were used to generate a most conservative (worst-case) estimate of the volume of potentially contaminated soil at Site 3-4 except for the possible dibromochloropropane spill area. This delineation of the boundaries of potential contamination should not be construed to indicate the actual presence of contamination within the volumes outlined. In addition, this approach is not intended to imply that any or all of the soil within the potentially contaminated volume must be remediated, nor does it make any assumption about the type of remediation that may be required. Rather, this approach is intended to provide preliminary estimates of the maximum possible volume of contaminated materials for planning purposes only.



Legend

- 1
- ⊙ (40) Phase I boring location and depth (ft.)
- Area of Potentially Contaminated Soil (100 ft) diameter x 0-4 ft depth (Boring 14 and Petrex Location 6) and 0-9 (Boring 27) Not to Scale



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FIGURE 3-4-8

Quantity of Potentially
 Contaminated Soil

Rocky Mountain Arsenal, Task 7

Prepared by Ebasco Services Incorporated

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Appendix 3-4 -A

**Chemical Names
and Abbreviations**

APPENDIX 3-4-A
CHEMICAL NAMES AND ABBREVIATIONS

Analytic Methods

Abbreviations

Atomic Absorption Spectroscopy	AA
Gas Chromatography/Conductivity Detector	GCCON
Gas Chromatography/Electron Capture Detector	GCECD
Gas Chromatography/Flame Ionization Detector	GCFID
Gas Chromatography/Flame Photometric Detector	GCFPD
Gas Chromatography/Mass Spectrometry	GCMS
Gas Chromatography/Nitrogen Phosphorous Detector	GCNPD
Gas Chromatography/Photoionization Detector	GCPID
High Performance Liquid Chromatography	HPLC
Inductive Coupled Argon Plasma Screen	ICP
Ion Chromatography	IONCHROM
Spectrophotometry	SPECT

PHASE I ANALYTES AND CERTIFIED METHODS
SOIL SAMPLES

<u>Analysis/Methods/Analytes</u>	<u>Synonymous Names Used in Appendix B</u>	<u>Abbreviations</u>
<u>AGENT PRODUCTS/HPLC</u>		<u>TDG</u>
Chloroacetic acid	Chloroacetic acid	CLC2A
Thiodiglycol	Thiodiglycol (TDG)	TDGCL
<u>AGENT PRODUCTS/IONCHROM</u>		<u>GBDP</u>
Isopropylmethylphosphonic acid	Isopropylmethylphosphonate	IMPA
<u>ANIONS/IONCHROM</u>		<u>ANIONS</u>
Chloride	Chloride	CL
Fluoride	Fluoride	FL
Sulfate	Sulfate	SO4
<u>ARSENIC/AA</u>	Arsenic	<u>AS</u>
<u>DIBROMOCHLOROPROPANE/GCECD</u>	Dibromochloropropane	<u>DBCP</u>
<u>HYDRAZINES/SPECT</u>		<u>HYD</u>
Hydrazine	Hydrazine	HYDRZ
Methylhydrazine	Methylhydrazine	MHYDRZ
Unsymmetrical dimethyl hydrazine	Unsymmetrical dimethyl hydrazine	UDMH
<u>MERCURY/AA</u>	Mercury	<u>HG</u>

APPENDIX 3-4-A (Continued)
PHASE I

<u>Analysis/Methods/Analytes</u>	<u>Synonymous Names Used in Appendix B</u>	<u>Abbreviations</u>
<u>METALS/ICP</u>		
Cadmium	Cadmium	ICP CD
Chromium	Chromium	CR
Copper	Copper	CU
Lead	Lead	PB
Zinc	Zinc	ZN
<u>ORGANONITROGEN COMPOUNDS/GCNPD</u>		
n-Nitrosodimethylamine	n-Nitrosodimethylamine	ONC NNDMEA
n-Nitrosodi-n-propylamine	n-Nitrosodi-n-propylamine	NNDNPA
<u>ORGANOPHOSPHOROUS COMPOUNDS/GCFPD</u>		
Diisopropylmethyl phosphonate	Diisopropylmethyl phosphonate	OPC DIMP
Dimethylmethyl phosphonate	Dimethylmethyl phosphate	DMMP
<u>SEMIVOLATILE ORGANIC COMPOUNDS/ GCMS</u>		
1,4-Oxathiane	1,4-Oxathiane	SVO OXAT
2,2-bis(Para-chlorophenyl)- 1,1-dichloroethane	Dichlorodiphenylethane	PPDDE
2,2-bis(Para-chlorophenyl)- 1,1-trichloroethane	Dichlorodiphenyltrichloro- ethane	PPDDT
Aldrin	Aldrin	ALDRN
Atrazine	Atrazine	ATZ
Chlordane	Chlordane	CLDAN
Chlorophenylmethyl sulfide	p-Chlorophenylmethyl sulfide	CPMS
Chlorophenylmethyl sulfone	p-Chlorophenylmethyl sulfone	CPMSO2
Chlorophenylmethyl sulfoxide	p-Chlorophenylmethyl sulfoxide	CPMSO
Dibromochloropropane	Dibromochloropropane	DBCP
Dicyclopentadiene	Dicyclopentadiene	DCPD
Dieldrin	Dieldrin	DLDRN
Diisopropylmethyl phosphonate	Diisopropylmethyl phosphonate	DIMP
Dimethylmethyl phosphonate	Dimethylmethyl phosphonate	DMMP*
Dithiane	Dithiane	DITH
Endrin	Endrin	ENDRN
Hexachlorocyclopentadiene	Hexachlorocyclopentadiene	CL6CP
Isodrin	Isodrin	ISODR
Malathion	Malathion	MLTHN
Parathion	Parathion	PRTHN
Supona	2-Chloro-1 (2,4-dichlorophenyl) vinyl-diethyl phosphates	SUPONA
Vapona	Vapona	DDVP

* DMMP is certified as part of the semivolatile organic compound method only for Hittman-Ebasco Laboratory.

APPENDIX 3-4-A (Continued)
 PHASE I

<u>Analysis/Methods/Analytes</u>	<u>Synonymous Names Used in Appendix B</u>	<u>Abbreviations</u>
<u>VOLATILE ORGANIC COMPOUNDS/ GCMS</u>		<u>VO</u>
1,1-Dichloroethane	1,1-Dichloroethane	11DCLE
1,2-Dichloroethane	1,2-Dichloroethane	12DCLE
1,1,1-Trichloroethane	1,1,1-Trichloroethane	111TCE
1,1,2-Trichloroethane	1,1,2-Trichloroethane	112TCE
Benzene	Benzene	C6H6
Bicycloheptadiene	Bicycloheptadiene	BCHPD
Carbon tetrachloride	Carbon tetrachloride	CCL4
Chlorobenzene	Chlorobenzene	CLC6H5
Chloroform	Chloroform	CHCL3
Dibromochloropropane	Dibromochloropropane	DBCP
Dicyclopentadiene	Dicyclopentadiene	DCPD
Dimethyldisulfide	Dimethyldisulfide	DMDS
Ethylbenzene	Ethylbenzene	ETC6H5
m-Xylene	m-Xylene	13DMB
Methylene chloride	Methylene chloride	CH2CL2
Methylisobutyl ketone	Methylisobutyl ketone	MIBK
o- and p-Xylene	Ortho- & Para-xylene	XYLEN
Tetrachloroethylene	Tetrachloroethene	TCLEE
Toluene	Toluene	MEC6H5
Trans-1,2-dichloroethylene	Trans-1,2-dichloroethene	12DCE
Trichloroethylene	Trichloroethene	TRCLE

APPENDIX 3-4-A
CHEMICAL NAMES AND ABBREVIATIONS

PHASE II ANALYTES AND CERTIFIED METHODS
SOIL SAMPLES

<u>Analysis/Methods/Analytes</u>	<u>Synonymous Names Used in Appendix B</u>	<u>Abbreviations</u>
<u>AGENT PRODUCTS/HPLC</u> (Same as Phase I)		<u>TDG</u>
<u>AGENT PRODUCTS/IONCHROM</u> (Same as Phase I)		<u>GBDP</u>
<u>ANIONS/IONCHROM</u> (Same as Phase I)		<u>ANIONS</u>
<u>ARSENIC/AA</u>	Arsenic	<u>AS</u>
<u>DIBROMOCHLOROPROPANE/GC</u>	Dibromochloropropane	<u>DBCP</u>
<u>HYDRAZINES/SPECT</u> (Same as Phase I)		<u>HYD</u>
<u>MERCURY/AA</u>	Mercury	<u>HG</u>
<u>METALS/ICP</u> (Same as Phase I)		<u>ICP</u>
<u>ORGANOCHLORINE PESTICIDES/GCECD</u>		<u>OCP</u>
2,2-bis(Para-chlorophenyl)- 1,1-dichloroethane	Dichlorodiphenylethane	<u>PPDDE</u>
2,2-bis(Para-chlorophenyl)- 1,1-1-trichloroethane	Dichlorodiphenyltrichloro- ethane	<u>PPDDT</u>
Aldrin	Aldrin	<u>ALDRN</u>
Chlordane	Chlordane	<u>CLDAN</u>
Dieldrin	Dieldrin	<u>DLDRN</u>
Endrin	Endrin	<u>ENDRN</u>
Hexachlorocyclopentadiene	Hexachlorocyclopentadiene	<u>CL6CP</u>
Isodrin	Isodrin	<u>ISODR</u>
<u>ORGANONITROGEN COMPOUNDS/GCNP</u> (Same as Phase I)		<u>ONC</u>
<u>ORGANOPHOSPHOROUS COMPOUNDS/GCFPD</u> (Same as Phase I)		<u>OPC</u>

APPENDIX 3-4-A (Continued)
PHASE II

<u>Analysis/Methods/Analytes</u>	<u>Synonymous Names Used in Appendix B</u>	<u>Abbreviations</u>
<u>ORGANOPHOSPHORUS PESTICIDES/ GCNPD</u>		
Atrazine	Atrazine	OPP
Malathion	Malathion	ATZ
Parathion	Parathion	MLTHN
Supona	2-Chloro-1 (2,4-dichlorophenyl) vinyl diethyl phosphates	PRTHN
Vapona	Vapona	SUPONA
<u>ORGANOSULPHUR COMPOUNDS/GCFPD</u>		
1,4-Oxathiane	1,4-Oxathiane	DDVP
Chlorophenylmethyl sulfide	p-Chlorophenylmethyl sulfide	OSC
Chlorophenylmethyl sulfone	p-Chlorophenylmethyl sulfone	OXAT
Chlorophenylmethyl sulfoxide	p-Chlorophenylmethyl sulfoxide	CPMS
Dimethyldisulfide	Dimethyldisulfide	CPMSO2
Dithiane	Dithiane	CPMSO
<u>SEMIVOLATILE ORGANIC COMPOUNDS/ GCMS</u>		
(Same as Phase I)		DMS
<u>VOLATILE AROMATIC ORGANIC COMPOUNDS/GCPID</u>		
Benzene	Benzene	DITH
Ethylbenzene	Ethylbenzene	SVO
m-Xylene	m-Xylene	VAO
o- and p-Xylene	Ortho- & Para-xylene	C6H6
Toluene	Toluene	ETC6H5
<u>VOLATILE HALOGENATED ORGANIC COMPOUNDS/GCCON</u>		
1,1-Dichloroethane	1,1-Dichloroethane	13DMB
1,2-Dichloroethane	1,2-Dichloroethane	XYLEN
1,1-Dichloroethene	1,1-Dichloroethene	MEC6H5
1,1,1-Trichloroethane	1,1,1-Trichloroethane	
1,1,2-Trichloroethane	1,1,2-Trichloroethane	
Carbon tetrachloride	Carbon tetrachloride	
Chlorobenzene	Chlorobenzene	
Chloroform	Chloroform	
Methylene chloride	Methylene chloride	
Tetrachloroethylene	Tetrachloroethene	
Trans-1,2-dichloroethylene	Trans-1,2-dichloroethene	
Trichloroethylene	Trichloroethene	

APPENDIX 3-4-A (Continued)
PHASE II

<u>Analysis/Methods/Analytes</u>	<u>Synonymous Names Used in Appendix B</u>	<u>Abbreviations</u>
<u>VOLATILE HYDROCARBON COMPOUNDS/ GCFID</u>		<u>HYDCBN</u>
Bicycloheptadiene	Bicycloheptadiene	BCHPD
Dicyclopentadiene	Dicyclopentadiene	DCPD
Methylisobutyl ketone	Methylisobutyl ketone	MIBK
<u>VOLATILE ORGANIC COMPOUNDS/GCMS</u> (Same as Phase I)		<u>VO</u>

Appendix 4-6-B

Phase I Chemical Data

APPENDIX 3-4-B

Phase I Chemical Data

The analytical results of the laboratory analysis of soil samples collected as part of the Phase I program comprise the first part of Appendix 3-4-B. Data are listed sequentially by boring number and successive depths below the surface. Within each depth, all analytes for which the samples were tested are listed alphabetically. Results are given as less than (LT) the detection limit for the test laboratory, or as detected concentrations above this limit. Based on the accuracy of laboratory test methods, values for volatile and semivolatile compounds are considered accurate to one significant figure, values for dibromochloropropane when tested separately and for metals are considered accurate to two significant figures.

The second part of Appendix 3-4-B contains data from the blanks associated with Phase I analytical work. Blanks for Phase I soil samples were based on a homogenized subsample of composited samples from a known uncontaminated soil that is stratigraphically similar to the RMA soils. Blanks for Phase I water samples were based on distilled water. Control samples, or blanks, are introduced into the train of environmental samples to function as monitors on the performance of the analytical method. These samples function as quality control (QC) samples, and are an integral part of the quality assurance (QA) program for the project. The method blanks listed in this Appendix were utilized to verify that the laboratory was not a source of sample contamination. If contamination were detected in a method blank, corrective actions were taken to assure that reported concentrations of target analytes reflected sample analytes, and not analytes introduced by the laboratory process.

Summary of Analytical Results

Task 7, Site 3, 4

Nemeton Drill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0001	0-1	Soil	Aldrin	LT 3.	-01	ug/g	BLU004
			Arsenic	LT 2.5	+00	ug/g	BMD007
			Atrazine	LT 3.	-01	ug/g	BLU004
			Cadmium	LT 7.4	-01	ug/g	BMD007
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BLU004
			Chlordane	LT 2.	+00	ug/g	BLU004
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BLU004
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BLU004
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BLU004
			Chromium	LT 1.4	+01	ug/g	BMD007
			Copper	LT 1.4	+01	ug/g	BMD007
			Dibromochloropropane	LT 3.	-01	ug/g	BLU004
			Dibromochloropropane	LT 5.0	-03	ug/g	BLW005
			Dicyclopentadiene	LT 1.	+00	ug/g	BLU004
			Vapona	LT 3.	+00	ug/g	BLU004
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BLU004
			Dithiane	LT 4.	-01	ug/g	BLU004
			Dieldrin	LT 3.	-01	ug/g	BLU004
			Endrin	LT 5.	-01	ug/g	BLU004
			Mercury	LT 5.0	-02	ug/g	BKK007
Isodrin	LT 3.	-01	ug/g	BLU004			
Malathion	LT 7.	-01	ug/g	BLU004			
1,4-Oxathiane	LT 3.	-01	ug/g	BLU004			
Lead	LT 2.2	+01	ug/g	BMD007			
Dichlorodiphenylethane	LT 6.	-01	ug/g	BLU004			
Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BLU004			
Parathion	LT 9.	-01	ug/g	BLU004			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	ug/g	BLU004			
Zinc	5.2	+01	ug/g	BMD007			
0001	4-5	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g	BLV002
			1,1,2-Trichloroethane	LT 4.	-01	ug/g	BLV002
			1,1-Dichloroethane	LT 2.	+00	ug/g	BLV002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results Last 7 1/2 Mile 3/4 Remagen Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0001	4.5	Soil	1,2-Dichloroethane	LT 2.	+00	ug/g	BLV002
			1,2-Dichloroethane	LT 6.	-01	ug/g	BLV002
			m-Xylene	LT 8.	-01	ug/g	BLV002
			Aldrin	LT 3.	-01	ug/g	BLU005
			Arsenic	LT 2.5	+00	ug/g	BMC008
			Atrazine	LT 3.	-01	ug/g	BLU005
			Bicycloheptadiene	LT 4.	-01	ug/g	BLV002
			Benzene	LT 3.	-01	ug/g	BLV002
			Carbon Tetrachloride	LT 3.	-01	ug/g	BLV002
			Cadmium	LT 7.4	-01	ug/g	BMD008
			Methylene Chloride	LT 2.	+00	ug/g	BLV002
			Chloroform	LT 3.	-01	ug/g	BLV002
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BLU005
			Chlorobenzene	LT 1.	+00	ug/g	BLV002
			Chlorodane	LT 2.	+00	ug/g	BLU005
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BLU005
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BLU005
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BLU005
			Chromium	1.6	+01	ug/g	BMD008
			Copper	1.7	+01	ug/g	BMD008
Dibromochloropropane	LT 3.	-01	ug/g	BLU005			
Dibromochloropropane	LT 2.	+00	ug/g	BLV002			
Dibromochloropropane	LT 5.0	-03	ug/g	BLW006			
Dicyclopentadiene	LT 1.	+00	ug/g	BLU005			
Dicyclopentadiene	LT 7.	-01	ug/g	BLV002			
Vapona	LT 3.	+00	ug/g	BLU005			
Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BLU005			
Dithiane	LT 4.	-01	ug/g	BLU005			
Dieldrin	LT 3.	-01	ug/g	BLU005			
Dimethyldisulfide	LT 2.	+01	ug/g	BLV002			
Endrin	LT 5.	-01	ug/g	BLU005			
Ethylbenzene	LT 4.	-01	ug/g	BLV002			
Mercury	LT 5.0	-02	ug/g	BKK008			
Isodrin	LT 3.	-01	ug/g	BLU005			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Reporting Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0001	4-5	Soil	Toluene	LT 3.	-01	ug/g	BLV002
			Methylisobutyl ketone	LT 7.	-01	ug/g	BLV002
			Malathion	LT 7.	-01	ug/g	BLU005
			1,4-Oxathiane	LT 3.	-01	ug/g	BLU005
			Lead	1.3	+01	ug/g	BMD008
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BLU005
			bichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BLU005
			Parathion	LT 9.	-01	ug/g	BLU005
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	ug/g	BLU005
			Tetrachloroethene	LT 3.	-01	ug/g	BLV002
0001	9-10	Soil	Trichloroethene	LT 5.	-01	ug/g	BLV002
			ortho- & Para-Xylene	LT 5.	+00	ug/g	BLV002
			Zinc	6.9	+01	ug/g	BMD008
			1,1,1-Trichloroethane	LT 4.	-01	ug/g	BLV003
			1,1,2-Trichloroethane	LT 4.	-01	ug/g	BLV003
			1,1-Dichloroethane	LT 2.	+00	ug/g	BLV003
			1,2-Dichloroethane	LT 2.	+00	ug/g	BLV003
			1,2-Dichloroethane	LT 6.	-01	ug/g	BLV003
			m-Xylene	LT 8.	-01	ug/g	BLV003
			Aldrin	LT 3.	-01	ug/g	BLU006
0001	9-10	Soil	Arsenic	LT 2.5	+00	ug/g	BMC009
			Atrazine	LT 3.	01	ug/g	BLU006
			Bicycloheptadiene	LT 4.	-01	ug/g	BLV003
			Benzene	LT 3.	-01	ug/g	BLV003
			Carbon Tetrachloride	LT 3.	-01	ug/g	BLV003
			Cadmium	LT 7.4	-01	ug/g	BMC009
			Methylene Chloride	LT 2.	+00	ug/g	BLV003
			Chloroform	LT 3.	-01	ug/g	BLV003
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BLU006
			Chlorobenzene	LT 1.	+00	ug/g	BLV003
Chloroethane	LT 2.	+00	ug/g	BLU006			
p-Chloroethylmethyl Sulfide	LT 9.	01	ug/g	BLU006			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for Dibicycloheptadiene (DBCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Task 7, Site 3-4 Non-aqueous Spill Area

Summary of Analytical Results

Result Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0001	9-10	Soil	p-Chlorophenylmethyl Sulfide	LT 3. -01	ug/g	BLU006
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BLU006
			Chromium	LT 1. +01	ug/g	BMD009
			Copper	LT 9.5 +00	ug/g	BMD009
			Dibromochloropropane	LT 3. -01	ug/g	BLU006
			Dibromochloropropane	LT 2. +00	ug/g	BLV003
			Dibromochloropropane	LT 5.0 -03	ug/g	BLW007
			Dicyclopentadiene	LT 1. +00	ug/g	BLU006
			Dicyclopentadiene	LT 7. -01	ug/g	BLV003
			Vapona	LT 3. +00	ug/g	BLU006
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BLU006
			Dithiane	LT 4. -01	ug/g	BLU006
			Diethin	LT 3. -01	ug/g	BLU006
			Dimethyldisulfide	LT 2. +01	ug/g	BLV003
			Endrin	LT 5. -01	ug/g	BLU006
			Ethylbenzene	LT 4. -01	ug/g	BLV003
			Mercury	LT 5.0 -02	ug/g	BKK009
			Isodrin	LT 3. -01	ug/g	BLU006
			Toluene	LT 3. -01	ug/g	BLV003
			Methylisobutyl Ketone	LT 7. -01	ug/g	BLV003
Malathion	LT 7. -01	ug/g	BLU006			
1,4-Oxathiane	LT 3. -01	ug/g	BLU006			
Lead	LT 8.4 +00	ug/g	BMD009			
Dichlorodiphenylethane	LT 6. -01	ug/g	BLU006			
Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BLU006			
Parathion	LT 9. -01	ug/g	BLU006			
2-Chloro-1,2,4-Dichlorophenyl Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BLU006			
Tetrachloroethene	LT 3. -01	ug/g	BLV003			
Trichloroethene	LT 5. -01	ug/g	BLV003			
Ortho- & Para Xylene	LT 5. +00	ug/g	BLV003			
Zinc	LT 2.7 +01	ug/g	BMD009			
0002	0-1	Soil	Alidin	LT 3. -01	ug/g	BMA005

Note: Results for dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for Dicyclopentadiene (DCP) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	0-1	Soil	Arsenic	LT 2.5 +00	ug/g	BMC013
			Atrazine	LT 3. -01	ug/g	BMA005
			Cadmium	LT 7.4 -01	ug/g	BMD013
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMA005
			Chlordane	LT 2. +00	ug/g	BMA005
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMA005
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMA005
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMA005
			Chromium	LT 6.5 +00	ug/g	BMD013
			Copper	LT 7.1 +00	ug/g	BMD013
			Dibromochloropropane	LT 5.0 -03	ug/g	BLV011
			Dibromochloropropane	LT 3. -01	ug/g	BMA005
			Dicyclopentadiene	LT 1. +00	ug/g	BMA005
			Vanona	LT 3. +00	ug/g	BMA005
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMA005
0002	4-5	Soil	Dithiane	LT 4. -01	ug/g	BMA005
			Diethrin	LT 3. -01	ug/g	BMA005
			Endrin	LT 5. -01	ug/g	BMA005
			Mercury	LT 5.0 -02	ug/g	BKK013
			Isodrin	LT 3. -01	ug/g	BMA005
			Malathion	LT 7. -01	ug/g	BMA005
			1,4-Oxathiane	LT 3. -01	ug/g	BMA005
			Lead	LT 8.4 +00	ug/g	BMD013
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMA005
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMA005
			Parathion	LT 9. -01	ug/g	BMA005
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl Diethyl Phosphates	LT 6. -01	ug/g	BMA005
			Zinc	LT 1.7 +01	ug/g	BMD013
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BLV006
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BLV006
1,1-Dichloroethane	LT 2. +00	ug/g	BLV006			
1,2-Dichloroethane	LT 2. +00	ug/g	BLV006			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7 - Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	4-5	Soil	1,2-Dichloroethane	LT 6. -01	ug/g	BLV006
			m-Xylene	LT 8. -01	ug/g	BLV006
			Aldrin	LT 3. -01	ug/g	BMA006
			Arsenic	LT 2.5 +00	ug/g	BMC014
			Atrazine	LT 3. -01	ug/g	BMA006
			Bicycloheptadiene	LT 4. -01	ug/g	BLV006
			Benzene	LT 3. -01	ug/g	BLV006
			Carbon Tetrachloride	LT 3. -01	ug/g	BLV006
			Cadmium	LT 7.4 -01	ug/g	BMD014
			Methylene Chloride	LT 2. +00	ug/g	BLV006
			Chloroform	LT 3. -01	ug/g	BLV006
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMA006
			Chlorobenzene	LT 1. +00	ug/g	BLV006
			Chlordane	LT 2. +00	ug/g	BMA006
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMA006
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMA006
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMA006
			Chromium	1.4 +01	ug/g	BMD014
			Copper	1.0 +01	ug/g	BMD014
			Dibromochloropropane	LT 2. +00	ug/g	BLV006
			Dibromochloropropane	LT 5.0 -03	ug/g	BLW012
			Dibromochloropropane	LT 3. -01	ug/g	BMA006
			Dicyclopentadiene	LT 7. -01	ug/g	BLV006
			Dicyclopentadiene	LT 1. +00	ug/g	BMA006
			Vapona	LT 3. +00	ug/g	BMA006
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMA006
			Dithiane	LT 4. -01	ug/g	BMA006
Dieldrin	LT 3. -01	ug/g	BMA006			
Dimethyldisulfide	LT 2. +01	ug/g	BLV006			
Endrin	LT 5. -01	ug/g	BMA006			
Ethylbenzene	LT 4. -01	ug/g	BLV006			
Mercury	LT 5.0 -02	ug/g	BKK014			
Isodrin	LT 3. -01	ug/g	BMA006			
Toluene	LT 3. -01	ug/g	BLV006			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3-4 Nonradon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number				
0002	4-5	Soil	Methylisobutyl Ketone	LT 7.	-01	ug/g	BLV006			
			Malathion	LT 7.	-01	ug/g	BMA006			
			1,4-Oxathiane	LT 3.	-01	ug/g	BMA006			
			Lead	1.2	+01	ug/g	BMD014			
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMA006			
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMA006			
			Parathion	LT 9.	-01	ug/g	BMA006			
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	ug/g	BMA006			
			Tetrachloroethene	LT 3.	-01	ug/g	BLV006			
			Trichloroethene	LT 5.	-01	ug/g	BLV006			
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BLV006			
			Zinc	3.9	+01	ug/g	BMD014			
			0002	9-10	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g	BLV007
						1,1,2-Trichloroethane	LT 4.	-01	ug/g	BLV007
1,1-Dichloroethane	LT 2.	+00				ug/g	BLV007			
1,2-Dichloroethane	LT 2.	+00				ug/g	BLV007			
1,2-Dichloroethane	LT 6.	-01				ug/g	BLV007			
m-Xylene	LT 8.	-01				ug/g	BLV007			
Aldrin	LT 3.	-01				ug/g	BMA007			
Arsenic	3.0	+00				ug/g	BMC015			
Atrazine	LT 3.	-01				ug/g	BMA007			
Bicycloheptadiene	LT 4.	-01				ug/g	BLV007			
Benzene	LT 3.	-01				ug/g	BLV007			
Carbon Tetrachloride	LT 3.	-01				ug/g	BLV007			
Cadmium	LT 7.4	-01				ug/g	BMD015			
Methylene Chloride	LT 2.	+00				ug/g	BLV007			
Chloroform	LT 3.	-01	ug/g	BLV007						
0002	9-10	Soil	Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMA007			
			Chlorobenzene	LT 1.	+00	ug/g	BLV007			
			Chlordane	LT 2.	+00	ug/g	BMA007			
			p-Chlorophenylmethyl Sulfide	LT 2.	-01	ug/g	BMA007			
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMA007			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for bicycloheptadiene (BCHP) may appear in up to two analytical fractions.

Task 7 - Site 3-4 Nonagen Spill Area

Summary of Analytical Results

Receiving Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
00002	9-10	Soil	p-chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMA007
			Chromium	1.6	+01	ug/g	BMD015
			Copper	1.7	+01	ug/g	BMD015
			Dibromochloropropane	LT 2.	+00	ug/g	BLV007
			Dibromochloropropane	LT 5.0	-03	ug/g	BLW013
			Dibromochloropropane	LT 3.	-01	ug/g	BMA007
			Dicyclopentadiene	LT 7.	-01	ug/g	BLV007
			Dicyclopentadiene	LT 1.	+00	ug/g	BMA007
			Vapona	LT 3.	+00	ug/g	BMA007
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BMA007
			Dithiane	LT 4.	-01	ug/g	BMA007
			Dieldrin	LT 3.	-01	ug/g	BMA007
			Dimethyldisulfide	LT 2.	+01	ug/g	BLV007
			Endrin	LT 5.	-01	ug/g	BMA007
			Ethylbenzene	LT 4.	-01	ug/g	BLV007
			Mercury	LT 5.0	-02	ug/g	BKK015
			Isodrin	LT 3.	-01	ug/g	BMA007
Toluene	LT 3.	-01	ug/g	BLV007			
Methylisobutyl ketone	LT 7.	-01	ug/g	BLV007			
Malathion	LT 7.	-01	ug/g	BMA007			
00003	0-1	Soil	1,4-Oxathiane	LT 3.	-01	ug/g	BMA007
			Lead	1.2	+01	ug/g	BMD015
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMA007
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMA007
			Parathion	LT 9.	-01	ug/g	BMA007
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	ug/g	BMA007
			Tetrachloroethene	LT 3.	-01	ug/g	BLV007
			Trichloroethene	LT 5.	-01	ug/g	BLV007
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BLV007
			Zinc	5.1	+01	ug/g	BMD015
			Aldrin	LT 3.	-01	ug/g	ANX002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nonagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0003	0-1	Soil	Arsenic	LT 5.0 +00	ug/g	ANX009
			Atrazine	LT 3. -01	ug/g	ANX002
			Cadmium	LT 6.6 -01	ug/g	A0B011
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	ANX002
			Chlordane	LT 6. -01	ug/g	ANX002
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	ANX002
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	ANX002
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	ANX002
			Chromium	6.8 +00	ug/g	A0B011
			Copper	8.3 +00	ug/g	A0B011
			Dibromochloropropane	LT 3. -01	ug/g	ANX002
			Dibromochloropropane	LT 5.0 -03	ug/g	ANY005
			Dicyclopentadiene	LT 4. -01	ug/g	ANX002
			Vapona	LT 3. -01	ug/g	ANX002
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	ANX002
			Dithiane	LT 7. +00	ug/g	ANX002
			Dieldrin	LT 3. -01	ug/g	ANX002
			Endrin	LT 3. -01	ug/g	ANX002
			Mercury	LT 5.0 -02	ug/g	A0A011
			Isodrin	LT 3. -01	ug/g	ANX002
Malathion	LT 3. -01	ug/g	ANX002			
1,4-Oxathiane	LT 6. +00	ug/g	ANX002			
Lead	LT 1.3 +01	ug/g	A0B011			
Dichlorodiphenylethane	LT 3. -01	ug/g	ANX002			
Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	ANX002			
Parathion	LT 4. -01	ug/g	ANX002			
2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	ANX002			
Zinc	3.4 +01	ug/g	A0B011			
0003	4-5	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	ANW002
			1,1,2-Trichloroethane	LT 3. 01	ug/g	ANW002
			1,1-Dichloroethane	LT 2. -01	ug/g	ANW002
			1,2-Dichloroethane	LT 3. -01	ug/g	ANW002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3, 4, Nonwater Drill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0003	4-5	Soil	m-Xylene	LT 7.	-01	ug/g	ANW002
			Aldrin	LT 3.	-01	ug/g	ANX003
			Arsenic	LT 5.0	+00	ug/g	ADCD10
			Atrazine	LT 3.	-01	ug/g	ANX003
			Bicycloheptadiene	LT 3.	-01	ug/g	ANW002
			Benzene	LT 3.	-01	ug/g	ANW002
			Carbon Tetrachloride	LT 3.	-01	ug/g	ANW002
			Cadmium	LT 6.6	-01	ug/g	ADB012
			Methylene Chloride	2.	+00	ug/g	ANW002
			Chloroform	LT 3.	-01	ug/g	ANW002
			Hexachlorocyclopentadiene	LT 3.	-01	ug/g	ANX003
			Chlorobenzene	LT 3.	-01	ug/g	ANW002
			Chlordane	LT 6.	-01	ug/g	ANX003
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	ANX003
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	ANX003
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	ANX003
			Chromium	LT 5.2	+00	ug/g	ADB012
			Copper	LT 4.9	+00	ug/g	ADB012
			Dibromochloropropane	LT 4.	-01	ug/g	ANW002
			Dibromochloropropane	LT 3.	-01	ug/g	ANX003
			Dibromochloropropane	LT 5.0	-03	ug/g	ANY006
			Dicyclopentadiene	LT 3.	-01	ug/g	ANW002
			Dicyclopentadiene	LT 4.	-01	ug/g	ANX003
			Dacron	LT 3.	-01	ug/g	ANX003
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g	ANX003
			Dithiane	LT 7.	+00	ug/g	ANX003
			Dieldrin	LT 3.	-01	ug/g	ANX003
Dimethyldisulfide	LT 8.	-01	ug/g	ANW002			
Endrin	LT 3.	-01	ug/g	ANX003			
Ethylbenzene	LT 3.	-01	ug/g	ANW002			
Mercury	LT 5.0	-02	ug/g	AWA012			
Isodrin	LT 3.	-01	ug/g	ANX003			
Toluene	LT 3.	-01	ug/g	ANW002			
Methylisobutyl Ketone	LT 3.	-01	ug/g	ANW002			

Note: Results for dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for dicyclopentadiene (DCPP) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0003	4-5	Soil	Malathion	LT 3.	-01	ug/g	ANX003
			1,4-Oxathiane	LT 6.	+00	ug/g	ANX003
			Lead	LT 1.3	+01	ug/g	AOB012
			Dichlorodiphenylethane	LT 3.	-01	ug/g	ANX003
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	ANX003
			Parathion	LT 4.	-01	ug/g	ANX003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3.	-01	ug/g	ANX003
			Trans-1,2-Dichloroethene	LT 3.	-01	ug/g	ANW002
			Tetrachloroethene	LT 3.	-01	ug/g	ANW002
			Trichloroethene	LT 3.	-01	ug/g	ANW002
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	ANW002
			Zinc	2.0	+01	ug/g	AOB012
			1,1,1-Trichloroethane	LT 3.	-01	ug/g	AG002
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	AG002
1,1-Dichloroethane	LT 9.	-01	ug/g	AG002			
1,2-Dichloroethane	LT 3.	-01	ug/g	AG002			
m-Xylene	LT 7.	-01	ug/g	AG002			
Aldrin	LT 3.	-01	ug/g	AOH002			
Arsenic	LT 5.0	+00	ug/g	AOC011			
Atrazine	LT 3.	-01	ug/g	AOH002			
Bicycloheptadiene	LT 3.	-01	ug/g	AG002			
Benzene	LT 3.	-01	ug/g	AG002			
Carbon Tetrachloride	LT 3.	-01	ug/g	AG002			
Cadmium	LT 6.6	-01	ug/g	AOB013			
Methylene Chloride	2.	+00	ug/g	AG002			
Chloroform	LT 3.	-01	ug/g	AG002			
Hexachlorocyclopentadiene	LT 3.	-01	ug/g	AOH002			
Chlorobenzene	LT 3.	-01	ug/g	AG002			
Chlordane	LT 6.	-01	ug/g	AOH002			
p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	AOH002			
p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	AOH002			
p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	AOH002			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number			
0003	14-15	Soil	Chromium	LT 5.2	+00	A0B013			
			Copper	LT 4.9	+00	A0B013			
			Dibromochloropropane	LT 5.0	-03	ANY007			
			Dibromochloropropane	LT 4.	-01	A0G002			
			Dibromochloropropane	LT 3.	-01	A0H002			
			Dicyclopentadiene	LT 3.	-01	A0G002			
			Dicyclopentadiene	LT 4.	-01	A0H002			
			Vapona	LT 3.	-01	A0H002			
			Diisopropylmethyl Phosphonate	LT 3.	-01	A0H002			
			Dithiane	LT 7.	+00	A0H002			
			Dieldrin	LT 3.	-01	A0H002			
			Dimethyldisulfide	LT 8.	-01	A0G002			
			Endrin	LT 3.	-01	A0H002			
			Ethylbenzene	LT 3.	-01	A0G002			
			Mercury	LT 5.0	-02	A0A013			
			Isodrin	LT 3.	-01	A0H002			
			Toluene	LT 3.	-01	A0G002			
			Methylisobutyl Ketone	LT 3.	-01	A0G002			
			Malathion	LT 3.	-01	A0H002			
			1,4-Oxathiane	LT 6.	+00	A0H002			
			Lead	LT 1.3	+01	A0B013			
			Dichlorodiphenylethane	LT 3.	-01	A0H002			
			Dichlorodiphenyltrichloroethane	LT 6.	-01	A0H002			
			Parathion	LT 4.	-01	A0H002			
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	A0H002			
			Trans-1,2-Dichloroethene	LT 3.	-01	A0G002			
			Tetrachloroethene	LT 3.	-01	A0G002			
			Trichloroethene	LT 3.	-01	A0G002			
			Ortho- & Para Xylene	LT 3.	-01	A0G002			
			Zinc	1.3	+01	A0B013			
			0003	19-20	Soil	1,1,1-Trichloroethane	LT 3.	-01	A0G003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0003	19-20	Soil	1,1,2-Trichloroethane	LT 3. -01	ug/g	AO6003
			1,1-Dichloroethane	LT 9. -01	ug/g	AO6003
			1,2-Dichloroethane	LT 3. -01	ug/g	AO6003
			m-Xylene	LT 7. -01	ug/g	AO6003
			Aldrin	LT 3. -01	ug/g	A0H003
			Arsenic	LT 5.0 +00	ug/g	A0C012
			Atrazine	LT 3. -01	ug/g	A0H003
			Bicycloheptadiene	LT 3. -01	ug/g	A0G003
			Benzene	LT 3. -01	ug/g	A0G003
			Carbon Tetrachloride	LT 3. -01	ug/g	A0G003
			Cadmium	LT 6.6 -01	ug/g	A0B014
			Methylene Chloride	5. +00	ug/g	A0G003
			Chloroform	LT 3. -01	ug/g	A0G003
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	A0H003
			Chlorobenzene	LT 3. -01	ug/g	A0G003
			Chlordane	LT 6. -01	ug/g	A0H003
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	A0H003
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	A0H003
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	A0H003
			Chromium	LT 5.2 +00	ug/g	A0B014
Copper	LT 4.9 +00	ug/g	A0B014			
Dibromochloropropane	LT 5.0 -03	ug/g	ANY008			
Dibromochloropropane	LT 4. -01	ug/g	A0G003			
Dibromochloropropane	LT 3. -01	ug/g	A0H003			
Dicyclopentadiene	LT 3. -01	ug/g	A0G003			
Dicyclopentadiene	LT 4. -01	ug/g	A0H003			
Vapona	LT 3. -01	ug/g	A0H003			
Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	A0H003			
Dithiane	LT 7. +00	ug/g	A0H003			
Dieldrin	LT 3. -01	ug/g	A0H003			
Dimethyldisulfide	LT 8. -01	ug/g	A0G003			
Endrin	LT 3. -01	ug/g	A0H003			
Ethylbenzene	LT 3. -01	ug/g	A0G003			
Mercury	LT 5.0 -02	ug/g	A0A014			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number			
0003	19-20	Soil	Isodrin	LT 3. -01	ug/g	A0H003			
			Toluene	LT 3. -01	ug/g	A0G003			
			Methylisobutyl Ketone	LT 3. -01	ug/g	A0G003			
			Malathion	LT 3. -01	ug/g	A0H003			
			1,4-Oxathiane	LT 6. +00	ug/g	A0H003			
			Lead	LT 1.3 +01	ug/g	A0B014			
			Dichlorodiphenylethane	LT 3. -01	ug/g	A0H003			
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	A0H003			
			Parathion	LT 4. -01	ug/g	A0H003			
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3. -01	ug/g	A0H003			
			Trans-1,2-Dichloroethene	LT 3. -01	ug/g	A0G003			
			Tetrachloroethene	LT 3. -01	ug/g	A0G003			
			Trichloroethene	LT 3. -01	ug/g	A0G003			
			Ortho- & Para-Xylene	LT 3. -01	ug/g	A0G003			
			Zinc	2.2 +01	ug/g	A0B014			
			0003	24-25	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	A0G004
						1,1,2-Trichloroethane	LT 3. -01	ug/g	A0G004
						1,1-Dichloroethane	LT 9. -01	ug/g	A0G004
						1,2-Dichloroethane	LT 3. -01	ug/g	A0G004
m-Xylene	LT 7. -01	ug/g				A0G004			
Aldrin	LT 3. -01	ug/g				A0H004			
Arsenic	LT 5.0 +00	ug/g				A0C013			
Atrazine	LT 3. -01	ug/g				A0H004			
Bicycloheptadiene	LT 3. -01	ug/g				A0G004			
Benzene	LT 3. -01	ug/g				A0G004			
Carbon Tetrachloride	LT 3. -01	ug/g				A0G004			
Cadmium	LT 6.6 -01	ug/g				A0B015			
Methylene Chloride	2. +00	ug/g				A0G004			
Chloroform	LT 3. -01	ug/g				A0G004			
Hexachlorocyclopentadiene	LT 3. -01	ug/g				A0H004			
Chlorobenzene	LT 3. -01	ug/g				A0G004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0003	24-25	Soil	Chlordane	LT 6.	-01	ug/g	A0H004
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	A0H004
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	A0H004
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	A0H004
			Chromium	LT 5.2	+00	ug/g	A0B015
			Copper	LT 4.9	+00	ug/g	A0B015
			Dibromochloropropane	LT 5.0	-03	ug/g	ANY009
			Dibromochloropropane	LT 4.	-01	ug/g	A0G004
			Dibromochloropropane	LT 3.	-01	ug/g	A0H004
			Dicyclopentadiene	LT 3.	-01	ug/g	A0G004
			Dicyclopentadiene	LT 4.	+00	ug/g	A0H004
			Vapona	LT 3.	-01	ug/g	A0H004
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g	A0H004
			Dithiane	LT 7.	+00	ug/g	A0H004
			Dieldrin	LT 3.	-01	ug/g	A0H004
			Dimethyldisulfide	LT 8.	-01	ug/g	A0G004
			Endrin	LT 3.	-01	ug/g	A0H004
			Ethylbenzene	LT 3.	-01	ug/g	A0G004
			Mercury	LT 5.0	-02	ug/g	A0A015
			Isodrin	LT 3.	-01	ug/g	A0H004
Toluene	LT 3.	-01	ug/g	A0G004			
Methylisobutyl Ketone	LT 3.	-01	ug/g	A0G004			
Malathion	LT 3.	-01	ug/g	A0H004			
1,4-Oxathiane	LT 6.	+00	ug/g	A0H004			
Lead	LT 1.3	+01	ug/g	A0B015			
Dichlorodiphenylethane	LT 3.	-01	ug/g	A0H004			
Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	A0H004			
Parathion	LT 4.	-01	ug/g	A0H004			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl Diethyl Phosphates	LT 3.	-01	ug/g	A0H004			
Trans-1,2-Dichloroethene	LT 3.	-01	ug/g	A0G004			
Tetrachloroethene	LT 3.	-01	ug/g	A0G004			
Trichloroethene	LT 3.	-01	ug/g	A0G004			

Note: Results for Dibromochloropropane (DBP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0003	24-25	Soil	Ortho- & Para-Xylene	LT 3. -01	ug/g	A06004
			Zinc	1.8 +01	ug/g	A06015
0004	0-1	Soil	Aldrin	LT 3. -01	ug/g	BM0004
			Arsenic	LT 5.0 +00	ug/g	BMS020
			Atrazine	LT 3. -01	ug/g	BM0004
			Cadmium	LT 7.4 -01	ug/g	BMX014
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BM0004
			Chlordane	LT 2. +00	ug/g	BM0004
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BM0004
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BM0004
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BM0004
			Chromium	LT 6.5 +00	ug/g	BMX014
			Copper	5.6 +00	ug/g	BMX014
			Dibromochloropropane	LT 3. -01	ug/g	BM0004
			Dibromochloropropane	LT 5.0 -03	ug/g	BMR017
Dicyclopentadiene	LT 1. +00	ug/g	BM0004			
Vapona	LT 3. +00	ug/g	BM0004			
0004	4-5	Soil	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BM0004
			Dithiane	LT 4. -01	ug/g	BM0004
			Diethrin	LT 3. -01	ug/g	BM0004
			Endrin	LT 5. -01	ug/g	BM0004
			Mercury	LT 5.0 -02	ug/g	BMW012
			Isodrin	LT 3. -01	ug/g	BM0004
			Malathion	LT 7. -01	ug/g	BM0004
			1,4-Oxathiane	LT 3. -01	ug/g	BM0004
			Lead	1.4 +01	ug/g	BMX014
			Dichlorodiphenylethane	LT 6. -01	ug/g	BM0004
0004	4-5	Soil	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BM0004
			Parathion	LT 9. -01	ug/g	BM0004
			2-Chloro-1(2,4-dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BM0004
			Zinc	2.6 +01	ug/g	BMX014
			1,1,1-Trichloroethane	LT 3. -01	ug/g	BM0008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	4-5	Soil	1,1,2-Trichloroethane	LT 3. -01	ug/g	BM0008
			1,1-Dichloroethane	LT 9. -01	ug/g	BM0008
			1,2-Dichloroethane	LT 3. -01	ug/g	BM0008
			1,2-Dichloroethane	LT 3. -01	ug/g	BM0008
			m-Xylene	LT 7. -01	ug/g	BM0008
			Aldrin	LT 3. -01	ug/g	BM0005
			Arsenic	LT 5.0 +00	ug/g	BMS021
			Atrazine	LT 3. -01	ug/g	BM0005
			Bicycloheptadiene	LT 3. -01	ug/g	BM0008
			Benzene	LT 3. -01	ug/g	BM0008
			Carbon Tetrachloride	LT 3. -01	ug/g	BM0008
			Cadmium	LT 7.4 -01	ug/g	BMX015
			Methylene Chloride	LT 7. -01	ug/g	BM0008
			Chloroform	LT 3. -01	ug/g	BM0008
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BM0005
			Chlorobenzene	LT 3. -01	ug/g	BM0008
			Chlordane	LT 2. +00	ug/g	BM0005
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BM0005
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BM0005
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BM0005
Chromium	9.2 +00	ug/g	BMX015			
Copper	1.2 +01	ug/g	BMX015			
Dibromochloropropane	LT 4. -01	ug/g	BM0008			
Dibromochloropropane	LT 3. -01	ug/g	BM0005			
Dibromochloropropane	LT 5.0 -03	ug/g	BMR018			
Dicyclopentadiene	LT 3. -01	ug/g	BM0008			
Dicyclopentadiene	LT 1. +00	ug/g	BM0005			
Vanona	LT 3. +00	ug/g	BM0005			
Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BM0005			
Dithiane	LT 4. -01	ug/g	BM0005			
Dieldrin	LT 3. -01	ug/g	BM0005			
Dimethyldisulfide	LT 8. -01	ug/g	BM0008			
Endrin	LT 5. -01	ug/g	BM0005			
Ethylbenzene	LT 3. -01	ug/g	BM0008			

Note: Results for Dibromochloropropane (DRCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results Task 7, Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	4-5	Soil	Mercury	LT 5.0 -02	ug/g	BMX013
			Isodrin	LT 3. -01	ug/g	BMQ005
			Toluene	LT 3. -01	ug/g	BMQ008
			Methylisobutyl Ketone	LT 3. -01	ug/g	BMQ008
			Malathion	LT 7. -01	ug/g	BMQ005
			1,4-Oxathiane	LT 3. -01	ug/g	BMQ005
			Lead	LT 8.4 +00	ug/g	BMX015
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMQ005
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMQ005
			Parathion	LT 9. -01	ug/g	BMQ005
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BMQ005
			Tetrachloroethene	LT 3. -01	ug/g	BMQ008
			Trichloroethene	LT 3. -01	ug/g	BMQ008
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BMQ008
			Zinc	3.6 +01	ug/g	BMX015
0005	0-1	Soil	Aldrin	LT 3. -01	ug/g	BMQ006
			Arsenic	LT 5.0 +00	ug/g	BMS022
			Atrazine	LT 3. -01	ug/g	BMQ006
			Cadmium	LT 7.4 -01	ug/g	BMX016
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMQ006
			Chlordane	LT 2. +00	ug/g	BMQ006
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMQ006
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMQ006
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMQ006
			Chromium	LT 6.5 +00	ug/g	BMX016
			Copper	LT 4.7 +00	ug/g	BMX016
			Dibromochloropropane	LT 5.0 -03	ug/g	BMR019
			Dibromochloropropane	LT 3. -01	ug/g	BMQ006
			Dicyclopentadiene	LT 1. +00	ug/g	BMQ006
			Vapona	LT 3. +00	ug/g	BMQ006
Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMQ006			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number				
0005	0-1	Soil	Dithiane	LT 4.	-01	ug/g	BM0006			
			Dieldrin	LT 3.	-01	ug/g	BM0006			
			Endrin	LT 5.	-01	ug/g	BM0006			
			Mercury	LT 5.0	-02	ug/g	BM0014			
			Isodrin	LT 3.	-01	ug/g	BM0006			
			Malathion	LT 7.	-01	ug/g	BM0006			
			1,4-Oxathiane	LT 3.	-01	ug/g	BM0006			
			Lead	1.3	+01	ug/g	BMX016			
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BM0006			
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BM0006			
			Parathion	LT 9.	-01	ug/g	BM0006			
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	ug/g	BM0006			
			Zinc	3.0	+01	ug/g	BMX016			
			0005	4-5	Soil	1,1,1-Trichloroethane	LT 3.	-01	ug/g	BM0009
						1,1,2-Trichloroethane	LT 3.	-01	ug/g	BM0009
1,1-Dichloroethane	LT 9.	-01				ug/g	BM0009			
1,2-Dichloroethane	LT 3.	-01				ug/g	BM0009			
1,2-Dichloroethane	LT 3.	-01				ug/g	BM0009			
m-Xylene	LT 7.	-01				ug/g	BM0009			
Aldrin	LT 3.	-01				ug/g	BM0007			
Arsenic	LT 5.0	+00				ug/g	BMS023			
Atrazine	LT 3.	-01				ug/g	BM0007			
Bicycloheptadiene	LT 3.	-01				ug/g	BM0009			
Benzene	LT 3.	-01				ug/g	BM0009			
Carbon tetrachloride	LT 3.	-01				ug/g	RM0009			
Cadmium	LT 7.4	-01				ug/g	BMX017			
Methylene Chloride	LT 7.	-01				ug/g	BM0009			
Chloroform	LT 3.	-01				ug/g	BM0009			
0005	4-5	Soil	Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BM0007			
			Chlorobenzene	LT 3.	-01	ug/g	BM0009			
			Chlordane	LT 2.	+00	ug/g	BM0007			
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BM0007			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4 Neimagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0005	4-5	Soil	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BM0007
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BM0007
			Chromium	LT 6.5 +00	ug/g	BMX017
			Copper	LT 4.7 +00	ug/g	BMX017
			Dibromochloropropane	LT 4. -01	ug/g	BM0009
			Dibromochloropropane	LT 5.0 -03	ug/g	BMR020
			Dibromochloropropane	LT 3. -01	ug/g	BM0007
			Dicyclopentadiene	LT 3. -01	ug/g	BM0009
			Dicyclopentadiene	LT 1. +00	ug/g	BM0007
			Vapona	LT 3. +00	ug/g	BM0007
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BM0007
			Dithiane	LT 4. -01	ug/g	BM0007
			Dieldrin	LT 3. -01	ug/g	BM0007
			Dimethyldisulfide	LT 8. -01	ug/g	BM0009
			Endrin	LT 5. -01	ug/g	BM0007
			Ethylbenzene	LT 3. -01	ug/g	BM0009
			Mercury	LT 5.0 -02	ug/g	BMW015
			Isodrin	LT 3. -01	ug/g	BM0007
			Toluene	LT 3. -01	ug/g	BM0009
			Methylisobutyl Ketone	LT 3. -01	ug/g	BM0009
Malathion	LT 7. -01	ug/g	BM0007			
1,4-Oxathiane	LT 3. -01	ug/g	BM0007			
Lead	LT 1.3 +01	ug/g	BMX017			
Dichlorodiphenylethane	LT 6. -01	ug/g	BM0007			
Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BM0007			
Parathion	LT 9. -01	ug/g	BM0007			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BM0007			
Tetrachloroethene	LT 3. -01	ug/g	BM0009			
Trichloroethene	LT 3. -01	ug/g	BM0009			
Ortho- & Para-Xylene	LT 3. -01	ug/g	BM0009			
Zinc	3.0 +01	ug/g	BMX017			
0007	0-1	Soil	Aldrin	LT 3. -01	ug/g	AGND02

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	0-1	Soil	Arsenic	LT 5.0 +00	ug/g	AOC014
			Atrazine	LT 3. -01	ug/g	AON002
			Cadmium	LT 6.6 -01	ug/g	AOB016
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	AON002
			Chlordane	LT 6. -01	ug/g	AON002
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	AON002
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	AON002
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	AON002
			Chromium	LT 5.2 +00	ug/g	AOB016
			Copper	LT 4.9 +00	ug/g	AOB016
			Dibromochloropropane	LT 5.0 -03	ug/g	AGM005
			Dibromochloropropane	LT 3. -01	ug/g	AON002
			Dicyclopentadiene	LT 4. -01	ug/g	AON002
			Vapona	LT 3. -01	ug/g	AON002
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	AON002
			0007	4-5	Soil	Dithiane
Dieldrin	LT 3. -01	ug/g				AON002
Endrin	LT 3. -01	ug/g				AON002
Mercury	LT 5.0 -02	ug/g				AOA016
Isodrin	LT 3. -01	ug/g				AON002
Malathion	LT 3. -01	ug/g				AON002
1,4-Oxathiane	LT 6. +00	ug/g				AON002
Lead	LT 1.3 +01	ug/g				AOB016
Dichlorodiphenylethane	LT 3. -01	ug/g				AON002
Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g				AON002
Parathion	LT 4. -01	ug/g				AON002
2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g				AON002
Zinc	2.6 +01	ug/g				AOB016
1,1,1-Trichloroethane	LT 3. -01	ug/g				ADK002
1,1,2-Trichloroethane	LT 3. -01	ug/g				ADK002
1,1-Dichloroethane	LT 9. -01	ug/g				ADK002
1,2-Dichloroethane	LT 3. -01	ug/g	ADK002			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCP) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	4-5	Soil	m-Xylene	LT 7. -01	ug/g	AOK002
			Aldrin	LT 3. -01	ug/g	AON003
			Arsenic	LT 5.0 +00	ug/g	AOC015
			Atrazine	LT 3. -01	ug/g	AON003
			Bicycloheptadiene	LT 3. -01	ug/g	AOK002
			Benzene	LT 3. -01	ug/g	AOK002
			Carbon Tetrachloride	LT 3. -01	ug/g	AOK002
			Cadmium	LT 6.6 -01	ug/g	AOB017
			Methylene Chloride	LT 7. -01	ug/g	AOK002
			Chloroform	LT 3. -01	ug/g	AOK002
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	AON003
			Chlorobenzene	LT 3. -01	ug/g	AOK002
			Chlordane	LT 6. -01	ug/g	AON003
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	AON003
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	AON003
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	AON003
			Chromium	7.4 +00	ug/g	AOB017
			Copper	1.1 +01	ug/g	AOB017
			Dibromochloropropane	LT 4. -01	ug/g	AOK002
			Dibromochloropropane	LT 5.0 -03	ug/g	AOM006
Dibromochloropropane	LT 3. -01	ug/g	AON003			
Dicyclopentadiene	LT 3. -01	ug/g	AOK002			
Dicyclopentadiene	LT 4. -01	ug/g	AON003			
Vapona	LT 3. -01	ug/g	AON003			
Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	AON003			
Dithiane	LT 7. +00	ug/g	AON003			
Dieldrin	LT 3. -01	ug/g	AON003			
Dimethyldisulfide	LT 8. -01	ug/g	AOK002			
Endrin	LT 3. -01	ug/g	AON003			
Ethylbenzene	LT 3. -01	ug/g	AOK002			
Mercury	LT 5.0 -02	ug/g	AOA017			
Isodrin	LT 3. -01	ug/g	AON003			
Toluene	LT 3. -01	ug/g	AOK002			
Methylisobutyl Ketone	LT 3. -01	ug/g	AOK002			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results
 Test 7, Site 3-4 Nemagan Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	4-5	Soil	Melathion	LT 3. -01	ug/g	ACN003
			1,4-Oxathiane	LT 6. +00	ug/g	ACN003
			Lead	LT 1.3 +01	ug/g	A0B017
			Dichlorodiphenylethane	LT 3. -01	ug/g	ACN003
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	ACN003
			Parathion	LT 4. -01	ug/g	ACN003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	ACN003
			Trans-1,2-Dichloroethene	LT 3. -01	ug/g	AOK002
			Tetrachloroethene	LT 3. -01	ug/g	AOK002
			Trichloroethene	LT 3. -01	ug/g	AOK002
0007	9-10	Soil	Ortho- & Para-Xylene	LT 3. -01	ug/g	AOK002
			Zinc	3.0 +01	ug/g	A0B017
			1,1,1-Trichloroethane	LT 3. -01	ug/g	AOK003
			1,1,2-Trichloroethane	LT 3. -01	ug/g	AOK003
			1,1-Dichloroethane	LT 9. -01	ug/g	AOK003
			1,2-Dichloroethane	LT 3. -01	ug/g	AOK003
			m-Xylene	LT 7. -01	ug/g	AOK003
			Aldrin	LT 3. -01	ug/g	ACN004
			Arsenic	LT 5.0 +00	ug/g	A0C016
			Atrazine	LT 3. -01	ug/g	ACN004
0007	9-10	Soil	Bicycloheptadiene	LT 3. -01	ug/g	AOK003
			Benzene	LT 3. -01	ug/g	AOK003
			Carbon Tetrachloride	LT 3. -01	ug/g	AOK003
			Cadmium	LT 6.6 -01	ug/g	A0B018
			Methylene Chloride	LT 7. -01	ug/g	AOK003
			Chloroform	LT 3. -01	ug/g	AOK003
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	ACN004
			Chlorobenzene	LT 3. -01	ug/g	AOK003
			Chloroethane	LT 6. -01	ug/g	ACN004
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	ACN004
0007	9-10	Soil	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	ACN004
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	ACN004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3, 4

Nonaqueous Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	9-10	Soil	Chromium	LT 5.2	+00	AOB018
			Copper	LT 7.3	+00	AOB018
			Dibromochloropropane	LT 4.	-01	AOK003
			Dibromochloropropane	LT 5.0	-03	AOM007
			Dibromochloropropane	LT 3.	-01	AON004
			Dicyclopentadiene	LT 3.	-01	AOK003
			Dicyclopentadiene	LT 4.	-01	AON004
			Vapona	LT 3.	-01	AON004
			Diisopropylmethyl Phosphonate	LT 3.	-01	AON004
			Dithiane	LT 7.	+00	AON004
			Dieldrin	LT 3.	-01	AON004
			Dimethyldisulfide	LT 8.	-01	AOK003
			Endrin	LT 3.	-01	AON004
			Ethylbenzene	LT 3.	-01	AOK003
			Mercury	LT 5.0	-02	AOK003
			Isodrin	LT 3.	-01	AGAD18
			Toluene	LT 3.	-01	AON004
			Methylisobutyl Ketone	LT 3.	-01	AOK003
			Malathion	LT 3.	-01	AOK003
			1,4-Oxathiane	LT 6.	+00	AON004
			Lead	LT 1.3	+01	AON004
			Dichlorodiphenylethane	LT 3.	-01	AOB018
			Dichlorodiphenyltrichloroethane	LT 6.	-01	AON004
			Parathion	LT 4.	-01	AON004
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	AON004
			Trans-1,2-Dichloroethene	LT 3.	-01	AOK003
			Tetrachloroethene	LT 3.	-01	AOK003
Trichloroethene	LT 3.	-01	AOK003			
Ortho- & Para-Xylene	LT 3.	-01	AOK003			
Zinc	LT 2.6	+01	AOB018			
1,1,1-Trichloroethane	LT 3.	-01	AOK004			
0007	14-15	Soil				

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
01007	14-15	Soil	1,1,2-Trichloroethane	LT 3. -01	ug/g	ADK004
			1,1-Dichloroethane	LT 9. -01	ug/g	ADK004
			1,2-Dichloroethane	LT 3. -01	ug/g	ADK004
			m-Xylene	LT 7. -01	ug/g	ADK004
			Aldrin	LT 3. -01	ug/g	ADN005
			Arsenic	LT 5.0 +00	ug/g	AOC017
			Atrazine	LT 3. -01	ug/g	ADN005
			Bicycloheptadiene	LT 3. -01	ug/g	ADK004
			Benzene	LT 3. -01	ug/g	ADK004
			Carbon Tetrachloride	LT 3. -01	ug/g	ADK004
			Cadmium	LT 6.6 -01	ug/g	AOB019
			Methylene Chloride	LT 7. -01	ug/g	ADK004
			Chloroform	LT 3. -01	ug/g	ADK004
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	ADN005
			Chlorobenzene	LT 3. -01	ug/g	ADK004
			Chlordane	LT 6. -01	ug/g	ADN005
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	ADN005
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	ADN005
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	ADN005
			Chromium	LT 5.2 +00	ug/g	AOB019
			Copper	LT 4.9 +00	ug/g	AOB019
			Dibromochloropropane	LT 4. -01	ug/g	ADK004
			Dibromochloropropane	LT 5.0 -03	ug/g	ADN008
			Dibromochloropropane	LT 3. -01	ug/g	ADN005
			Dicyclopentadiene	LT 3. -01	ug/g	ADK004
			Dicyclopentadiene	LT 4. -01	ug/g	ADN005
			Vapona	LT 3. -01	ug/g	ADN005
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	ADN005
			Dithiane	LT 7. +00	ug/g	ADN005
			Dieldrin	LT 3. -01	ug/g	ADN005
			Dimethyldisulfide	LT 8. -01	ug/g	ADK004
			Endrin	LT 3. -01	ug/g	ADN005
			Ethylbenzene	LT 3. -01	ug/g	ADK004
Mercury	LT 5.0 -02	ug/g	AOA019			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7 . Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number			
0007	14-15	Soil	Isodrin	LT 3. -01	ug/g	AON005			
			Toluene	LT 3. -01	ug/g	AOK004			
			Methylisobutyl Ketone	LT 3. -01	ug/g	AOK004			
			Malathion	LT 3. -01	ug/g	AON005			
			1,4-Oxathiane	LT 6. +00	ug/g	AON005			
			Lead	LT 1.3 +01	ug/g	AOB019			
			Dichlorodiphenylethane	LT 3. -01	ug/g	AON005			
			Dichlorodiphenyltrichloro- ethane	LT 6. -01	ug/g	AON005			
			Parathion	LT 4. -01	ug/g	AON005			
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	AON005			
			Trans-1,2-Dichloroethene	LT 3. -01	ug/g	AOK004			
			Tetrachloroethene	LT 3. -01	ug/g	AOK004			
			Trichloroethene	LT 3. -01	ug/g	AOK004			
			Ortho- & Para-Xylene	LT 3. -01	ug/g	AOK004			
			Zinc	2.1 +01	ug/g	AOB019			
			0007	19-20	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	AOK005
						1,1,2-Trichloroethane	LT 3. -01	ug/g	AOK005
						1,1-Dichloroethane	LT 9. -01	ug/g	AOK005
						1,2-Dichloroethane	LT 3. -01	ug/g	AOK005
						m-Xylene	LT 7. -01	ug/g	AOK005
Aldrin	LT 3. -01	ug/g				AON006			
Arsenic	LT 5.0 +00	ug/g				AOC018			
Atrazine	LT 3. -01	ug/g				AON006			
Bicycloheptadiene	LT 3. -01	ug/g				AOK005			
Benzene	LT 3. -01	ug/g				AOK005			
Carbon Tetrachloride	LT 3. -01	ug/g				AOK005			
Cadmium	LT 6.6 -01	ug/g				AOB020			
Methylene Chloride	1. +00	ug/g				AOK005			
Chloroform	LT 3. -01	ug/g				AOK005			
Hexachlorocyclopentadiene	LT 3. -01	ug/g				AON006			
Chlorobenzene	LT 3. -01	ug/g				AOK005			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	19-20	Soil	Chlordane	LT 6.	-01	ug/g
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g
			Chromium	LT 5.2	+00	ug/g
			Copper	6.5	+00	ug/g
			Dibromochloropropane	LT 4.	-01	ug/g
			Dibromochloropropane	LT 5.0	-03	ug/g
			Dibromochloropropane	LT 3.	-01	ug/g
			Dicyclopentadiene	LT 3.	-01	ug/g
			Dicyclopentadiene	LT 4.	-01	ug/g
			Vapona	LT 3.	-01	ug/g
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g
			Dithiane	LT 7.	+00	ug/g
			Dieldrin	LT 3.	-01	ug/g
			Dimethyldisulfide	LT 8.	-01	ug/g
			Endrin	LT 3.	-01	ug/g
			Ethylbenzene	LT 3.	-01	ug/g
			Mercury	LT 5.0	-02	ug/g
			Isodrin	LT 3.	-01	ug/g
			Toluene	LT 3.	-01	ug/g
			Methylisobutyl Ketone	LT 3.	-01	ug/g
			Malathion	LT 3.	-01	ug/g
			1,4-Oxathiane	LT 6.	+00	ug/g
			Lead	LT 1.3	+01	ug/g
			Dichlorodiphenylethane	LT 3.	-01	ug/g
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g
			Parathion	LT 4.	-01	ug/g
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	ug/g
			Trans-1,2-Dichloroethene	LT 3.	-01	ug/g
			Tetrachloroethene	LT 3.	-01	ug/g
			Trichloroethene	LT 3.	-01	ug/g

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	28-29	Soil	Dimethyldisulfide	LT 8. -01	ug/g	AOR002
			Endrin	LT 3. -01	ug/g	AOS002
			Ethylbenzene	LT 3. -01	ug/g	AOR002
			Mercury	LT 5.0 -02	ug/g	APN005
			Isodrin	LT 3. -01	ug/g	AOS002
			Toluene	LT 3. -01	ug/g	AOR002
			Methylisobutyl Ketone	LT 3. -01	ug/g	AOR002
			Malathion	LT 3. -01	ug/g	AOS002
			1,4-Oxathiane	LT 6. +00	ug/g	AOS002
			Lead	LT 8.4 +00	ug/g	APAD005
			Dichlorodiphenylethane	LT 3. -01	ug/g	AOS002
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	AOS002
			Parathion	LT 4. -01	ug/g	AOS002
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g	AOS002
Trans-1,2-Dichloroethene	LT 3. -01	ug/g	AOR002			
0007	39-40	Soil	Tetrachloroethene	LT 3. -01	ug/g	AOR002
			Trichloroethene	LT 3. -01	ug/g	AOR002
			Ortho- & Para-Xylene	LT 3. -01	ug/g	AOR002
			Zinc	2.3 +01	ug/g	APAD005
			1,1,1-Trichloroethane	LT 3. -01	ug/g	AOR003
			1,1,2-Trichloroethane	LT 3. -01	ug/g	AOR003
			1,1-Dichloroethane	LT 9. -01	ug/g	AOR003
			1,2-Dichloroethane	LT 3. -01	ug/g	AOR003
			m-Xylene	LT 7. -01	ug/g	AOR003
			Aldrin	LT 3. -01	ug/g	AOS003
			Arsenic	LT 5.0 +00	ug/g	AOC020
			Atrazine	LT 3. -01	ug/g	AOS003
			Bicycloheptadiene	LT 3. -01	ug/g	AOR003
			Benzene	LT 3. -01	ug/g	AOR003
Carbon Tetrachloride	LT 3. -01	ug/g	AOR003			
Cadmium	LT 7.4 -01	ug/g	APAD006			
Methylene Chloride	4. +00	ug/g	AOR003			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	39--40	Soil	Chloroform	LT 3. -01	ug/g	AOR003
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	AOS003
			Chlorobenzene	LT 3. -01	ug/g	AOR003
			Chlordane	LT 6. -01	ug/g	AOS003
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	AOS003
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	AOS003
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	AOS003
			Chromium	LT 6.5 +00	ug/g	APAD06
			Copper	LT 1.1 +01	ug/g	APAD06
			Dibromochloropropane	LT 5.0 -03	ug/g	ADM011
			Dibromochloropropane	LT 4. -01	ug/g	AOR003
			Dibromochloropropane	LT 3. -01	ug/g	AOS003
			Dibromochloropropane	LT 3. -01	ug/g	AOR003
			Dicyclopentadiene	LT 4. -01	ug/g	AOS003
			Vapona	LT 3. -01	ug/g	AOS003
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	AOS003
			Dithiane	LT 7. +00	ug/g	AOS003
			Dieldrin	LT 3. -01	ug/g	AOS003
			Dimethyldisulfide	LT 8. -01	ug/g	AOR003
			Endrin	LT 3. -01	ug/g	AOS003
			Ethylbenzene	LT 3. -01	ug/g	AOR003
			Mercury	LT 5.0 -02	ug/g	APN006
			Isodrin	LT 3. -01	ug/g	AOS003
			Toluene	LT 3. -01	ug/g	AOR003
			Methylisobutyl Ketone	LT 3. -01	ug/g	AOR003
			Malathion	LT 3. -01	ug/g	AOS003
			1,4-Oxathiane	LT 6. +00	ug/g	AOS003
			Lead	LT 8.4 +00	ug/g	APAD06
			Dichlorodiphenylethane	LT 3. -01	ug/g	AOS003
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	AOS003
			Parathion	LT 4. -01	ug/g	AOS003
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g	AOS003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	39-40	Soil	Trans-1,2-Dichloroethene	LT 3. -01	ug/g	ADR003
			Tetrachloroethene	LT 3. -01	ug/g	ADR003
			Trichloroethene	LT 3. -01	ug/g	ADR003
			Ortho- & Para-Xylene	LT 3. -01	ug/g	ADR003
			Zinc	4.2 +01	ug/g	APAD06
0007	49-50	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	ADR004
			1,1,2-Trichloroethane	LT 3. -01	ug/g	ADR004
			1,1-Dichloroethane	LT 9. -01	ug/g	ADR004
			1,2-Dichloroethane	LT 3. -01	ug/g	ADR004
			m-Xylene	LT 7. -01	ug/g	ADR004
			Aldrin	LT 3. -01	ug/g	AOS004
			Arsenic	LT 5.0 +00	ug/g	AOC021
			Atrazine	LT 3. -01	ug/g	AOS004
			Bicycloheptadiene	LT 3. -01	ug/g	ADR004
			Benzene	LT 3. -01	ug/g	ADR004
			Carbon Tetrachloride	LT 3. -01	ug/g	ADR004
			Cadmium	9.7 -01	ug/g	APAD07
			Methylene Chloride	LT 7. -01	ug/g	ADR004
			Chloroform	LT 3. -01	ug/g	ADR004
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	AOS004
			Chlorobenzene	LT 3. -01	ug/g	ADR004
			Chloroethane	LT 6. -01	ug/g	AOS004
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	AOS004
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	AOS004
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	AOS004
Chromium	LT 6.5 +00	ug/g	APAD07			
Copper	1.2 +01	ug/g	APAD07			
Dibromochloropropane	LT 5.0 -03	ug/g	ADM012			
Dibromochloropropane	LT 4. -01	ug/g	ADR004			
Dibromochloropropane	LT 3. -01	ug/g	AOS004			
Dicyclopentadiene	LT 3. -01	ug/g	ADR004			
Dicyclopentadiene	LT 4. -01	ug/g	AOS004			
Vapona	LT 3. -01	ug/g	AOS004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	49-50	Soil	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	AOS004
			Dithiane	LT 7. +00	ug/g	AOS004
			Dieldrin	LT 3. -01	ug/g	AOS004
			Dimethyldisulfide	LT 8. -01	ug/g	AOR004
			Endrin	LT 3. -01	ug/g	AOS004
			Ethylbenzene	LT 3. -01	ug/g	AOR004
			Mercury	LT 5.0 -02	ug/g	AFN007
			Isodrin	LT 3. -01	ug/g	AOS004
			Toluene	LT 3. -01	ug/g	AOR004
			Methylisobutyl Ketone	LT 3. -01	ug/g	AOR004
			Malathion	LT 3. -01	ug/g	AOS004
			1,4-Oxathiane	LT 6. +00	ug/g	AOS004
			Lead	LT 8.4 +00	ug/g	APAD07
			Dichlorodiphenylethane	LT 3. -01	ug/g	AOS004
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	AOS004
			Parathion	LT 4. -01	ug/g	AOS004
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g	AOR004
			Trans-1,2-Dichloroethene	LT 3. -01	ug/g	AOR004
			Tetrachloroethene	LT 3. -01	ug/g	AOR004
			Trichloroethene	LT 3. -01	ug/g	AOR004
Ortho- & Para-Xylene	LT 3. -01	ug/g	AOR004			
Zinc	1.9 +02	ug/g	APAD07			
0007	59-60	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	APF002
			1,1,2-Trichloroethane	LT 3. -01	ug/g	APF002
			1,1-Dichloroethane	LT 9. -01	ug/g	APF002
			1,2-Dichloroethane	LT 3. -01	ug/g	APF002
			m-Xylene	LT 7. -01	ug/g	APF002
			Aldrin	LT 3. -01	ug/g	APB002
			Arsenic	LT 5.0 +00	ug/g	AOC022
			Atrazine	LT 3. -01	ug/g	APB002
			Bicycloheptadiene	LT 3. -01	ug/g	APF002
			Benzene	LT 3. -01	ug/g	APF002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	59-60	Soil	Carbon Tetrachloride	LT 3. -01	ug/g	APF002
			Cadmium	1.0 +00	ug/g	APA008
			Methylene Chloride	LT 7. -01	ug/g	APF002
			Chloroform	LT 3. -01	ug/g	APF002
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	APB002
			Chlorobenzene	LT 3. -01	ug/g	APF002
			Chlordane	LT 6. -01	ug/g	APB002
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	APB002
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	APB002
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	APB002
			Chromium	LT 6.5 +00	ug/g	APA008
			Copper	LT 4.7 +00	ug/g	APA008
			Dibromochloropropane	LT 3. -01	ug/g	APB002
			Dibromochloropropane	LT 4. -01	ug/g	APF002
			Dibromochloropropane	LT 5.0 -03	ug/g	API005
			Dicyclopentadiene	LT 4. -01	ug/g	APB002
			Dicyclopentadiene	LT 3. -01	ug/g	APF002
			Vapona	LT 3. -01	ug/g	APB002
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	APB002
			Dithiane	LT 7. +00	ug/g	APB002
Dieldrin	LT 3. -01	ug/g	APB002			
Dimethyldisulfide	LT 8. -01	ug/g	APF002			
Endrin	LT 3. -01	ug/g	APB002			
Ethylbenzene	LT 3. -01	ug/g	APF002			
Mercury	LT 5.0 -02	ug/g	APN008			
Isodrin	LT 3. -01	ug/g	APB002			
Toluene	LT 3. -01	ug/g	APF002			
Methylisobutyl Ketone	LT 3. -01	ug/g	APF002			
Malathion	LT 3. -01	ug/g	APB002			
1,4-Oxathiane	LT 6. +00	ug/g	APB002			
Lead	LT 8.4 +00	ug/g	APA008			
Dichlorodiphenylethane	LT 3. -01	ug/g	APB002			
Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	APB002			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Newadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0007	59-60	Soil	Parathion	LT 4.	-01	ug/g	APB002
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	ug/g	APB002
			Tri-n-butyl Phosphates	LT 3.	-01	ug/g	APF002
			Tetrachloroethene	LT 3.	-01	ug/g	APF002
			Trichloroethene	LT 3.	-01	ug/g	APF002
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	APF002
			Zinc	2.3	+01	ug/g	APA008
			1,1,1-Trichloroethane	LT 3.	-01	ug/g	APF003
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	APF003
			1,1-Dichloroethane	LT 9.	-01	ug/g	APF003
0007	69-70	Soil	1,2-Dichloroethane	LT 3.	-01	ug/g	APF003
			m-Xylene	LT 7.	-01	ug/g	APF003
			Aldrin	LT 3.	-01	ug/g	APB003
			Arsenic	LT 5.0	+00	ug/g	AOC023
			Atrazine	LT 3.	-01	ug/g	APB003
			Bicycloheptadiene	LT 3.	-01	ug/g	APF003
			Benzene	LT 3.	-01	ug/g	APF003
			Carbon Tetrachloride	LT 3.	-01	ug/g	APF003
			Cadmium	1.2	+00	ug/g	APAO09
			Methylene Chloride	LT 7.	-01	ug/g	APF003
			Chloroform	LT 3.	-01	ug/g	APF003
			Hexachlorocyclopentadiene	LT 3.	-01	ug/g	APB003
			Chlorobenzene	LT 3.	-01	ug/g	APF003
			Chloroethane	LT 6.	-01	ug/g	APB003
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	APB003
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	APB003
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	APB003
			Chromium	LT 6.5	+00	ug/g	APA009
			Copper	LT 4.7	+00	ug/g	APA009
			Dibromochloropropane	LT 3.	-01	ug/g	APB003
			Dibromochloropropane	LT 4.	-01	ug/g	APF003
			Dibromochloropropane	LT 5.0	-03	ug/g	AP1006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPP) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemocon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0007	69-70	Soil	Dicyclopentadiene	LT 4.	-01	ug/g	APB003
			Dicyclopentadiene	LT 3.	-01	ug/g	APF003
			Vapona	LT 3.	-01	ug/g	APB003
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g	APB003
			Dithiane	LT 7.	+00	ug/g	APB003
			Dieldrin	LT 3.	-01	ug/g	APB003
			Dimethyldisulfide	LT 8.	-01	ug/g	APF003
			Endrin	LT 3.	-01	ug/g	APB003
			Ethylbenzene	LT 3.	-01	ug/g	APF003
			Mercury	LT 5.0	-02	ug/g	APN009
			Isodrin	LT 3.	-01	ug/g	APB003
			Toluene	LT 3.	-01	ug/g	APF003
			Methylisobutyl Ketone	LT 3.	-01	ug/g	APF003
			Malathion	LT 3.	-01	ug/g	APB003
			1,4-Oxathiane	LT 6.	+00	ug/g	APB003
			Lead	LT 8.4	+00	ug/g	APA009
			Dichlorodiphenylethane	LT 3.	-01	ug/g	APB003
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	APB003
			Parathion	LT 4.	-01	ug/g	APB003
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	ug/g	APB003
0007	74-75	Soil	Trans-1,2-Dichloroethene	LT 3.	-01	ug/g	APF003
			Tetrachloroethene	LT 3.	-01	ug/g	APF003
			Trichloroethene	LT 3.	-01	ug/g	APF003
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	APF003
			Zinc	1.9	+01	ug/g	APA009
			1,1,1-Trichloroethane	LT 3.	-01	ug/g	APF004
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	APF004
			1,1-Dichloroethane	LT 9.	-01	ug/g	APF004
			1,2-Dichloroethane	LT 3.	-01	ug/g	APF004
			m-Xylene	LT 7.	-01	ug/g	APF004
Aldrin	LT 3.	-01	ug/g	APB004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	74-75	Soil	Arsenic	LT 5.0 +00	ug/g	ANC024
			Atrazine	LT 3. -01	ug/g	APB004
			Bicycloheptadiene	LT 3. -01	ug/g	APF004
			Benzene	LT 3. -01	ug/g	APF004
			Carbon Tetrachloride	LT 3. -01	ug/g	APF004
			Cadmium	1.4 +00	ug/g	APA010
			Methylene Chloride	1. +00	ug/g	APF004
			Chloroform	LT 3. -01	ug/g	APF004
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	APB004
			Chlorobenzene	LT 3. -01	ug/g	APF004
			Chlordane	LT 6. -01	ug/g	APB004
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	APB004
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	APB004
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	APB004
			Chromium	LT 6.5 +00	ug/g	APA010
			Copper	8.7 +00	ug/g	APA010
			Dibromochloropropane	LT 3. -01	ug/g	APB004
			Dibromochloropropane	LT 4. -01	ug/g	APF004
			Dibromochloropropane	LT 5.0 -03	ug/g	API007
			Dicyclopentadiene	LT 4. -01	ug/g	APB004
			Dicyclopentadiene	LT 3. -01	ug/g	APF004
			Vapena	LT 3. -01	ug/g	APB004
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	APB004
			Dithiane	LT 7. +00	ug/g	APB004
			Dieldrin	LT 3. -01	ug/g	APB004
			Dimethyldisulfide	LT 8. -01	ug/g	APF004
			Endrin	LT 3. -01	ug/g	APB004
			Ethylbenzene	LT 3. -01	ug/g	APF004
			Mercury	LT 5.0 -02	ug/g	APN010
			Isodrin	LT 3. -01	ug/g	APB004
			Toluene	LT 3. -01	ug/g	APF004
			Methylisobutyl Ketone	LT 3. -01	ug/g	APF004
			Malathion	LT 3. -01	ug/g	APB004
1,4-Oxathiane	LT 6. +00	ug/g	APB004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number				
0007	74-75	Soil	Lead	LT 8.4	+00	ug/g	APA010			
			Dichlorodiphenylethane	LT 3.	-01	ug/g	APB004			
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	APB004			
			Parathion	LT 4.	-01	ug/g	APB004			
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3.	-01	ug/g	APB004			
			Trans-1,2-Dichloroethene	LT 3.	-01	ug/g	APF004			
			Tetrachloroethene	LT 3.	-01	ug/g	APF004			
			Trichloroethene	LT 3.	-01	ug/g	APF004			
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	APF004			
			Zinc	LT 3.0	+01	ug/g	APA010			
			0008	0-1	Soil	Aldrin	LT 3.	-01	ug/g	AMV002
						Arsenic	LT 5.0	+00	ug/g	AMM021
						Atrazine	LT 3.	-01	ug/g	AMV002
						Cadmium	LT 6.6	-01	ug/g	AMG019
						Hexachlorocyclopentadiene	LT 3.	-01	ug/g	AMV002
Chlordane	LT 6.	-01				ug/g	AMV002			
p-Chlorophenylmethyl Sulfide	LT 4.	+00				ug/g	AMV002			
p-Chlorophenylmethyl Sulfoxide	LT 7.	+00				ug/g	AMV002			
p-Chlorophenylmethyl Sulfone	LT 6.	-01				ug/g	AMV002			
Chromium	LT 5.2	+00				ug/g	AMG019			
Copper	LT 4.9	+00				ug/g	AMG019			
Dibromochloropropane	LT 3.	-01				ug/g	AMV002			
Dibromochloropropane	LT 1.4	-02				ug/g	AMX005			
Dicyclopentadiene	LT 4.	-01				ug/g	AMV002			
Vapona	LT 3.	-01				ug/g	AMV002			
Diisopropylmethyl Phosphonate			Dithiane	LT 3.	-01	ug/g	AMV002			
			Dieldrin	LT 7.	+00	ug/g	AMV002			
			Endrin	LT 3.	-01	ug/g	AMV002			
			Mercury	LT 3.	-01	ug/g	AMV002			
				LT 5.0	-02	ug/g	AMM019			
				LT 3.	-01	ug/g	AMV002			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0008	0-1	Soil	Malathion	LT 3.	-01	ug/g	AMV002
			1,4-Oxathiane	LT 6.	+00	ug/g	AMV002
			Lead	LT 1.3	+01	ug/g	AMG019
			Dichlorodiphenylethane	LT 3.	-01	ug/g	AMV002
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	AMV002
			Parathion	LT 4.	-01	ug/g	AMV002
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3.	-01	ug/g	AMV002
			Zinc	2.0	+01	ug/g	AMG019
			1,1,1-Trichloroethane	LT 3.	-01	ug/g	AMU002
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	AMU002
0008	4-5	Soil	1,1-Dichloroethane	LT 9.	-01	ug/g	AMU002
			1,2-Dichloroethane	LT 3.	-01	ug/g	AMU002
			m-Xylene	LT 7.	-01	ug/g	AMU002
			Aldrin	LT 3.	-01	ug/g	AMV003
			Arsenic	LT 5.0	+00	ug/g	AMM022
			Atrazine	LT 3.	-01	ug/g	AMV003
			Bicycloheptadiene	LT 3.	-01	ug/g	AMU002
			Benzene	LT 3.	-01	ug/g	AMU002
			Carbon Tetrachloride	LT 3.	-01	ug/g	AMU002
			Cadmium	LT 6.6	-01	ug/g	AMG020
0008	4-5	Soil	Methylene Chloride	5.	+00	ug/g	AMU002
			Chloroform	LT 3.	-01	ug/g	AMU002
			Hexachlorocyclopentadiene	LT 3.	-01	ug/g	AMV003
			Chlorobenzene	LT 3.	-01	ug/g	AMU002
			Chlordane	LT 6.	-01	ug/g	AMV003
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	AMV003
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	AMV003
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	AMV003
			Chromium	LT 5.2	+00	ug/g	AMG020
			Copper	LT 4.9	+00	ug/g	AMG020
0008	4-5	Soil	Dibromochloropropane	LT 4.	-01	ug/g	AMU002
			Dibromochloropropane	LT 3.	-01	ug/g	AMV003
			Dibromochloropropane	LT 3.	-01	ug/g	AMV003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	4-5	Soil	Dibromochloropropane	LT 1.4	-02	ug/g
			Dicyclopentadiene	LT 3.	-01	ug/g
			Dicyclopentadiene	LT 4.	-01	ug/g
			Vapona	LT 3.	-01	ug/g
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g
			Dithiane	LT 7.	+00	ug/g
			Dieldrin	LT 3.	-01	ug/g
			Dimethyldisulfide	LT 8.	-01	ug/g
			Endrin	LT 3.	-01	ug/g
			Ethylbenzene	LT 3.	-01	ug/g
			Mercury	LT 5.0	-02	ug/g
			Isodrin	LT 3.	-01	ug/g
			Toluene	LT 3.	-01	ug/g
			Methylisobutyl Ketone	LT 3.	-01	ug/g
			Malathion	LT 3.	-01	ug/g
			1,4-Oxathiane	LT 6.	+00	ug/g
			Lead	LT 1.3	+01	ug/g
			Dichlorodiphenylethane	LT 3.	-01	ug/g
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g
			Parathion	LT 4.	-01	ug/g
0008	9-10	Soil	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3.	-01	ug/g
			Trans-1,2-Dichloroethene	LT 3.	-01	ug/g
			Tetrachloroethene	LT 3.	-01	ug/g
			Trichloroethene	LT 3.	-01	ug/g
			Ortho- & Para-Xylene	LT 3.	-01	ug/g
			Zinc	1.7	+01	ug/g
			1,1,1-Trichloroethane	LT 3.	-01	ug/g
			1,1,2-Trichloroethane	LT 3.	-01	ug/g
			1,1-Dichloroethane	LT 9.	-01	ug/g
			1,2-Dichloroethane	LT 3.	-01	ug/g
			m-Xylene	LT 7.	-01	ug/g

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	9-10	Soil	Aldrin	LT 3. -01	ug/g	AMV004
			Arsenic	LT 5.0 +00	ug/g	AMM023
			Atrazine	LT 3. -01	ug/g	AMV004
			Bicycloheptadiene	LT 3. -01	ug/g	AMU003
			Benzene	LT 3. -01	ug/g	AMU003
			Carbon Tetrachloride	LT 3. -01	ug/g	AMU003
			Cadmium	LT 6.6 -01	ug/g	A0B005
			Methylene Chloride	3. +00	ug/g	AMU003
			Chloroform	LT 3. -01	ug/g	AMU003
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	AMV004
			Chlorobenzene	LT 3. -01	ug/g	AMU003
			Chlordane	LT 6. -01	ug/g	AMV004
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	AMV004
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	AMV004
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	AMV004
			Chromium	8.1 +00	ug/g	A0B005
			Copper	9.4 +00	ug/g	A0B005
			Dibromochloropropane	LT 4. -01	ug/g	AMU003
			Dibromochloropropane	LT 3. -01	ug/g	AMV004
			Dibromochloropropane	LT 1.4 -02	ug/g	AMX007
			Dicyclopentadiene	LT 3. -01	ug/g	AMU003
			bicyclopentadiene	LT 4. -01	ug/g	AMV004
			Vapona	LT 3. -01	ug/g	AMV004
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	AMV004
			Dithiane	LT 7. +00	ug/g	AMV004
			Dieldrin	LT 3. -01	ug/g	AMV004
			Dimethyldisulfide	LT 8. -01	ug/g	AMU003
			Endrin	LT 3. -01	ug/g	AMV004
			Ethylbenzene	LT 3. -01	ug/g	AMU003
			Mercury	2.0 -01	ug/g	A0A005
			Isodrin	LT 3. -01	ug/g	AMV004
			Toluene	LT 3. -01	ug/g	AMU003
			Methylisobutyl Ketone	LT 3. -01	ug/g	AMU003
Malathion	LT 3. -01	ug/g	AMV004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3-4 Nemacon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number				
0008	9-10	Soil	1,4-Oxathiane	LT 6.	+00	ug/g	AMV004			
			Lead	LT 1.3	+01	ug/g	A08005			
			Dichlorodiphenylethane	LT 3.	-01	ug/g	AMV004			
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	AMV004			
			Parathion	LT 4.	-01	ug/g	AMV004			
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3.	-01	ug/g	AMV004			
			Trans-1,2-Dichloroethene	LT 3.	-01	ug/g	AMU003			
			Tetrachloroethene	LT 3.	-01	ug/g	AMU003			
			Trichloroethene	LT 3.	-01	ug/g	AMU003			
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	AMU003			
			Zinc	3.1	+01	ug/g	A08005			
			0008	14-15	Soil	1,1,1-Trichloroethane	LT 3.	-01	ug/g	AMU004
						1,1,2-Trichloroethane	LT 3.	-01	ug/g	AMU004
						1,1-Dichloroethane	LT 9.	-01	ug/g	AMU004
1,2-Dichloroethane	LT 3.	-01				ug/g	AMU004			
m-Xylene	LT 7.	-01				ug/g	AMU004			
Aldrin	LT 3.	-01				ug/g	AMV005			
Arsenic	LT 5.0	+00				ug/g	AMM024			
Atrazine	LT 3.	-01				ug/g	AMV005			
Bicycloheptadiene	LT 3.	-01				ug/g	AMU004			
Benzene	LT 3.	-01				ug/g	AMU004			
Carbon Tetrachloride	LT 3.	-01				ug/g	AMU004			
Cadmium	LT 6.6	-01				ug/g	A08006			
Methylene Chloride	1.	+00				ug/g	AMU004			
Chloroform	LT 3.	-01				ug/g	AMU004			
Hexachlorocyclopentadiene	LT 3.	-01	ug/g	AMV005						
0008	14-15	Soil	Chlorobenzene	LT 3.	-01	ug/g	AMU004			
			Chloroethane	LT 6.	-01	ug/g	AMV005			
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	AMV005			
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	AMV005			
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	AMV005			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPU) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	14-15	Soil	Chromium	LT 5.2	+00	ug/g
			Copper	LT 4.9	+00	ug/g
			Dibromochloropropane	LT 4.	-01	ug/g
			Dibromochloropropane	LT 3.	-01	ug/g
			Dibromochloropropane	LT 1.4	-02	ug/g
			Dicyclopentadiene	LT 3.	-01	ug/g
			Dicyclopentadiene	LT 4.	-01	ug/g
			Vapona	LT 3.	-01	ug/g
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g
			Dithiane	LT 7.	+00	ug/g
			Dieldrin	LT 3.	-01	ug/g
			Dimethyldisulfide	LT 8.	-01	ug/g
			Endrin	LT 3.	-01	ug/g
			Ethylbenzene	LT 3.	-01	ug/g
			Mercury	LT 5.0	-02	ug/g
			Isodrin	LT 3.	-01	ug/g
			Toluene	LT 3.	-01	ug/g
			Methylisobutyl Ketone	LT 3.	-01	ug/g
			Malathion	LT 3.	-01	ug/g
			1,4-Oxathiane	LT 6.	+00	ug/g
			Lead	LT 1.3	+01	ug/g
			Dichlorodiphenylethane	LT 3.	-01	ug/g
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g
			Parathion	LT 4.	-01	ug/g
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	ug/g
			Trans-1,2-Dichloroethene	LT 3.	-01	ug/g
			Tetrachloroethene	LT 3.	-01	ug/g
Trichloroethene	LT 3.	-01	ug/g			
Ortho- & Para-Xylene	LT 3.	-01	ug/g			
Zinc	1.5	+01	ug/g			
0008	19-20	Soil	1,1,1-Trichloroethane	LT 3.	-01	ug/g

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	19-20	Soil	1,1,2-Trichloroethane	LT 3. -01	ug/g	ANG002
			1,1-Dichloroethane	LT 9. -01	ug/g	ANG002
			1,2-Dichloroethane	LT 3. -01	ug/g	ANG002
			m-Xylene	LT 7. -01	ug/g	ANG002
			Aldrin	LT 3. -01	ug/g	ANH002
			Arsenic	LT 5.0 +00	ug/g	AOC005
			Atrazine	LT 3. -01	ug/g	ANH002
			Bicycloheptadiene	LT 3. -01	ug/g	ANG002
			Benzene	LT 3. -01	ug/g	ANG002
			Carbon Tetrachloride	LT 3. -01	ug/g	ANG002
			Cadmium	LT 6.6 -01	ug/g	ADB007
			Methylene Chloride	2. +00	ug/g	ANG002
			Chloroform	LT 3. -01	ug/g	ANG002
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	ANH002
			Chlorobenzene	LT 3. -01	ug/g	ANG002
			Chlordane	LT 6. -01	ug/g	ANH002
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	ANH002
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	ANH002
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	ANH002
			Chromium	LT 5.2 +00	ug/g	ADB007
Copper	LT 4.9 +00	ug/g	ADB007			
Dibromochloropropane	LT 1.4 -02	ug/g	AMX009			
Dibromochloropropane	LT 4. -01	ug/g	ANG002			
Dibromochloropropane	LT 3. -01	ug/g	ANH002			
Dicyclopentadiene	LT 3. -01	ug/g	ANG002			
Dicyclopentadiene	LT 4. -01	ug/g	ANH002			
Vapona	LT 3. -01	ug/g	ANH002			
Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	ANH002			
Dithiane	LT 7. +00	ug/g	ANH002			
Dieldrin	LT 3. -01	ug/g	ANH002			
Dimethyldisulfide	LT 8. -01	ug/g	ANG002			
Endrin	LT 3. -01	ug/g	ANH002			
Ethylbenzene	LT 3. -01	ug/g	ANG002			
Mercury	LT 5.0 -02	ug/g	AOA007			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number			
0008	19-20	Soil	Isodrin	LT 3. -01	ug/g	ANH002			
			Toluene	LT 3. -01	ug/g	ANG002			
			Methylisobutyl Ketone	LT 3. -01	ug/g	ANG002			
			Malathion	LT 3. -01	ug/g	ANH002			
			1,4-Oxathiane	LT 6. +00	ug/g	ANH002			
			Lead	LT 1.3 +01	ug/g	A08007			
			Dichlorodiphenylethane	LT 3. -01	ug/g	ANH002			
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	ANH002			
			Parathion	LT 4. -01	ug/g	ANH002			
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	ANH002			
			Trans-1,2-Dichloroethene	LT 3. -01	ug/g	ANG002			
			Tetrachloroethene	LT 3. -01	ug/g	ANG002			
			Trichloroethene	LT 3. -01	ug/g	ANG002			
			Ortho- & Para-Xylene	LT 3. -01	ug/g	ANG002			
			Zinc	1.8 +01	ug/g	A08007			
			0008	29-30	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	ANG003
						1,1,2-Trichloroethane	LT 3. -01	ug/g	ANG003
1,1-Dichloroethane	LT 9. -01	ug/g				ANG003			
1,2-Dichloroethane	LT 3. -01	ug/g				ANG003			
m-Xylene	LT 7. -01	ug/g				ANG003			
Aldrin	LT 3. -01	ug/g				ANH003			
Arsenic	LT 5.0 +00	ug/g				A0C006			
Atrazine	LT 3. -01	ug/g				ANH003			
Bicycloheptadiene	LT 3. -01	ug/g				ANG003			
Benzene	LT 3. -01	ug/g				ANG003			
Carbon Tetrachloride	LT 3. -01	ug/g				ANG003			
Cadmium	LT 6.6 -01	ug/g				A0B008			
Methylene Chloride	1. +00	ug/g				ANG003			
Chloroform	LT 3. -01	ug/g				ANG003			
Hexachlorocyclopentadiene	LT 3. -01	ug/g				ANH003			
Chlorobenzene	LT 3. -01	ug/g				ANG003			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	29-30	Soil	Chloro-dane	LT 6. -01	ug/g	ANH003
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	ANH003
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	ANH003
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	ANH003
			Chromium	LT 5.2 +00	ug/g	AOB008
			Copper	6.6 +00	ug/g	AOB008
			Dibromochloropropane	LT 1.4 -02	ug/g	AMXD10
			Dibromochloropropane	LT 4. -01	ug/g	ANG003
			Dibromochloropropane	LT 3. -01	ug/g	ANH003
			Dicyclopentadiene	LT 3. -01	ug/g	ANG003
			Dicyclopentadiene	LT 4. -01	ug/g	ANH003
			Vapona	LT 3. -01	ug/g	ANH003
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	ANH003
			Dithiane	LT 7. +00	ug/g	ANH003
			Dieldrin	LT 3. -01	ug/g	ANH003
			Dimethylidithiulfide	LT 8. -01	ug/g	ANG003
			Endrin	LT 3. -01	ug/g	ANH003
			Ethylbenzene	LT 3. -01	ug/g	ANG003
			Mercury	LT 5.0 -02	ug/g	AOAD08
			Isodrin	LT 3. -01	ug/g	ANH003
Toluene	LT 3. -01	ug/g	ANG003			
Methylisobutyl Ketone	LT 3. -01	ug/g	ANG003			
Malathion	LT 3. -01	ug/g	ANH003			
1,4-Oxathiane	LT 6. +00	ug/g	ANH003			
Lead	LT 1.3 +01	ug/g	AOB008			
Dichlorodiphenylethane	LT 3. -01	ug/g	ANH003			
Dichlorodiphenyltrichloro-ethane	LT 6. -01	ug/g	ANH003			
Parathion	LT 4. -01	ug/g	ANH003			
2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	ANH003			
Trans-1,2-Dichloroethene	LT 3. -01	ug/g	ANG003			
Tetrachloroethene	LT 3. -01	ug/g	ANG003			
Trichloroethene	LT 3. -01	ug/g	ANG003			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	29-30	Soil	Ortho- & Para-Xylene Zinc	LT 3. -01	ug/g	ANG003
				2.3 +01	ug/g	AOB008
0008	39-40	Soil	1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane m-Xylene	LT 3. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 9. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 7. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
0008	39-40	Soil	Aldrin Arsenic Atrazine Bicycloheptadiene Benzene Carbon Tetrachloride Cadmium Methylene Chloride Chloroform Hexachlorocyclopentadiene	LT 3. -01	ug/g	ANH004
				LT 5.0 +00	ug/g	AOC007
				LT 3. -01	ug/g	ANH004
				LT 3. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 6.6 -01	ug/g	ANG004
				2. +00	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANH004
				LT 3. -01	ug/g	ANH004
0008	39-40	Soil	Chlorobenzene Chlordane p-Chlorophenylmethyl Sulfide p-Chlorophenylmethyl Sulfoxide p-Chlorophenylmethyl Sulfone Chromium Copper Dibromochloropropane Dibromochloropropane Dibromochloropropane Dicyclopentadiene Dicyclopentadiene Vapona Diisopropylmethyl Phosphonate Dithiane Dieldrin	LT 3. -01	ug/g	ANG004
				LT 6. -01	ug/g	ANH004
				LT 4. +00	ug/g	ANH004
				LT 7. +00	ug/g	ANH004
				LT 6. -01	ug/g	ANH004
				LT 5.2 +00	ug/g	AOB009
				6.0 +00	ug/g	AOB009
				LT 1.4 -02	ug/g	ANE005
				LT 4. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANH004
				LT 3. -01	ug/g	ANG004
				LT 3. -01	ug/g	ANG004
				LT 4. -01	ug/g	ANH004
LT 3. -01	ug/g	ANH004				
LT 7. +00	ug/g	ANH004				
LT 3. -01	ug/g	ANH004				

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Newagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0008	39-40	Soil	Dimethyldisulfide	LT 8.	-01	ug/g	ANG004
			Endrin	LT 3.	-01	ug/g	ANH004
			Ethylbenzene	LT 3.	-01	ug/g	ANG004
			Mercury	LT 5.0	-02	ug/g	ADAD09
			Isodrin	LT 3.	-01	ug/g	ANH004
			Toluene	LT 3.	-01	ug/g	ANG004
			Methylisobutyl Ketone	LT 3.	-01	ug/g	ANG004
			Malathion	LT 3.	-01	ug/g	ANH004
			1,4-Oxathiane	LT 6.	+00	ug/g	ANH004
			Lead	LT 1.3	+01	ug/g	A08009
			Dichlorodiphenylethane	LT 3.	-01	ug/g	ANH004
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	ANH004
			Parathion	LT 4.	-01	ug/g	ANH004
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3.	-01	ug/g	ANH004
			Trans-1,2-Dichloroethene	LT 3.	-01	ug/g	ANG004
			Tetrachloroethene	LT 3.	-01	ug/g	ANG004
			Trichloroethene	LT 3.	-01	ug/g	ANG004
Ortho- & Para-Xylene	LT 3.	-01	ug/g	ANG004			
Zinc	1.9	+01	ug/g	A08009			
0008	44-45	Soil	1,1,1-Trichloroethane	LT 3.	-01	ug/g	ANG005
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	ANG005
			1,1-Dichloroethane	LT 9.	-01	ug/g	ANG005
			1,2-Dichloroethane	LT 3.	-01	ug/g	ANG005
			m-Xylene	LT 7.	-01	ug/g	ANG005
			Aldrin	LT 3.	-01	ug/g	ANH005
			Arsenic	LT 5.0	+00	ug/g	A0C008
			Atrazine	LT 3.	-01	ug/g	ANH005
			Bicycloheptadiene	LT 3.	-01	ug/g	ANG005
			Benzene	LT 3.	-01	ug/g	ANG005
			Carbon Tetrachloride	LT 3.	-01	ug/g	ANG005
			Cadmium	LT 6.6	-01	ug/g	A0B010
			Methylene Chloride	LT 3.	+00	ug/g	ANG005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	44-45	Soil	Chloroform	LT 3. -01	ug/g	ANG005
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	ANH005
			Chlorobenzene	LT 3. -01	ug/g	ANG005
			Chlordane	LT 6. -01	ug/g	ANH005
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	ANH005
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	ANH005
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	ANH005
			Chromium	LT 5.2 +00	ug/g	AOB010
			Copper	LT 4.9 +00	ug/g	AOB010
			Dibromochloropropane	LT 1.4 -02	ug/g	ANE006
			Dibromochloropropane	LT 4. -01	ug/g	ANG005
			Dibromochloropropane	LT 3. -01	ug/g	ANH005
			Dicyclopentadiene	LT 3. -01	ug/g	ANG005
			Dicyclopentadiene	LT 4. -01	ug/g	ANH005
			Vapona	LT 3. -01	ug/g	ANH005
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	ANH005
			Dithiane	LT 7. +00	ug/g	ANH005
			Dieldrin	LT 3. -01	ug/g	ANH005
			Dimethyldisulfide	LT 8. -01	ug/g	ANG005
			Endrin	LT 3. -01	ug/g	ANH005
			Ethylbenzene	LT 3. -01	ug/g	ANG005
			Mercury	LT 5.0 -02	ug/g	AOA010
			Isodrin	LT 3. -01	ug/g	ANH005
			Toluene	LT 3. -01	ug/g	ANG005
			Methylisobutyl Ketone	LT 3. -01	ug/g	ANG005
			Malathion	LT 3. -01	ug/g	ANH005
			1,4-Oxathiane	LT 6. +00	ug/g	ANH005
			Lead	LT 1.3 +01	ug/g	AOB010
			Dichlorodiphenylethane	LT 3. -01	ug/g	ANH005
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	ANH005
			Parathion	LT 4. -01	ug/g	ANH005
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	ANH005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3 4 Nemagoh Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	44-45	Soil	Trans-1,2-Dichloroethene	LT 3. -01	ug/g	ANG005
			Tetrachloroethene	LT 3. -01	ug/g	ANG005
			Trichloroethene	LT 3. -01	ug/g	ANG005
			Ortho- & Para-Xylene	LT 3. -01	ug/g	ANG005
			Zinc	1.2 +01	ug/g	A08010
0009	0-1	Soil	Aldrin	LT 3. -01	ug/g	BM0008
			Arsenic	LT 2.5 +00	ug/g	BMV005
			Atrazine	LT 3. -01	ug/g	BM0008
			Cadmium	LT 7.4 -01	ug/g	BMX018
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BM0008
			Chlordane	LT 2. +00	ug/g	BM0008
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BM0008
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BM0008
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BM0008
			Chromium	LT 6.5 +00	ug/g	BMX018
			Copper	7.8 +00	ug/g	BMX018
			Dibromochloropropane	LT 5.0 -03	ug/g	BNAD05
			Dibromochloropropane	LT 3. -01	ug/g	BM0008
			Dicyclopentadiene	LT 1. +00	ug/g	BM0008
			Vapona	LT 3. +00	ug/g	BM0008
Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BM0008			
	Dithiane	LT 4. -01	ug/g	BM0008		
	Dieldrin	LT 3. -01	ug/g	BM0008		
	Endrin	LT 5. -01	ug/g	BM0008		
	Mercury	LT 5.0 -02	ug/g	BMWD16		
Isodrin	LT 3. -01	ug/g	BM0008			
	Malathion	LT 7. -01	ug/g	BM0008		
	1,4-Oxathiane	LT 3. -01	ug/g	BM0008		
	Lead	LT 8.4 +00	ug/g	BMX018		
	Dichlorodiphenylethane	LT 6. -01	ug/g	BM0008		
Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BM0008			
	Parathion	LT 9. -01	ug/g	BM0008		

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7 . Site 3-4

Newagen Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0009	0-1	Soil	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BM0008
			Zinc	3.3 +01	ug/g	BMX018
0009	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BMZ002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BMZ002
			1,1-Dichloroethane	LT 2. +00	ug/g	BMZ002
			1,2-Dichloroethane	LT 2. +00	ug/g	BMZ002
			1,2-Dichloroethane	LT 6. -01	ug/g	BMZ002
			m-Xylene	LT 8. -01	ug/g	BMZ002
			Aldrin	LT 3. -01	ug/g	RM0009
			Arsenic	LT 2.5 +00	ug/g	BMV006
			Atrazine	LT 3. -01	ug/g	BM0009
			Bicycloheptadiene	LT 4. -01	ug/g	BMZ002
			Benzene	LT 3. -01	ug/g	BMZ002
			Carbon Tetrachloride	LT 3. -01	ug/g	BMZ002
			Cadmium	LT 7.4 -01	ug/g	BMX019
			Methylene Chloride	LT 2. +00	ug/g	BMZ002
			Chloroform	LT 3. -01	ug/g	BMZ002
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BM0009
			Chlorobenzene	LT 1. +00	ug/g	BMZ002
			Chlordane	LT 2. +00	ug/g	BM0009
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BM0009
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BM0009
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BM0009
			Chromium	LT 9.8 +00	ug/g	BMX019
			Copper	LT 4.7 +00	ug/g	BMX019
			Dibromochloropropane	LT 2. +00	ug/g	BMZ002
			Dibromochloropropane	LT 5.0 -03	ug/g	BNAD06
			Dibromochloropropane	LT 3. -01	ug/g	BM0009
			Dicyclopentadiene	LT 7. -01	ug/g	BMZ002
			Dicyclopentadiene	LT 1. +00	ug/g	BM0009
			Vapona	LT 3. +00	ug/g	BM0009
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BM0009

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemaqon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0009	4-5	Soil	Dithiane	LT 4.	-01	ug/g	BM0009
			Dieldrin	LT 3.	-01	ug/g	BM0009
			Dimethyldisulfide	LT 2.	+01	ug/g	BMZ002
			Endrin	LT 5.	-01	ug/g	BM0009
			Ethylbenzene	LT 4.	-01	ug/g	BMZ002
			Mercury	LT 5.0	-02	ug/g	BM0017
			Isodrin	LT 3.	-01	ug/g	BM0009
			Toluene	LT 3.	-01	ug/g	BMZ002
			Methylisobutyl Ketone	LT 7.	-01	ug/g	BMZ002
			Malathion	LT 7.	-01	ug/g	BM0009
			1,4-Oxathiane	LT 3.	-01	ug/g	BM0009
			Lead	LT 8.4	+00	ug/g	BMX019
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BM0009
			Dichlorodiphenyltrichloro-ethane	LT 5.	-01	ug/g	BM0009
			Parathion	LT 9.	-01	ug/g	BM0009
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	ug/g	BM0009
			Tetrachloroethene	LT 3.	-01	ug/g	BMZ002
			Trichloroethene	LT 5.	-01	ug/g	BMZ002
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BMZ002
			Zinc	3.7	+01	ug/g	BMX019
0010	0-1	Soil	Aldrin	LT 3.	-01	ug/g	BM0002
			Arsenic	LT 5.0	+00	ug/g	BMS018
			Atrazine	LT 3.	-01	ug/g	BM0002
			Cadmium	LT 7.4	-01	ug/g	BMX012
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BM0002
			Chlordane	LT 2.	+00	ug/g	BM0002
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BM0002
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BM0002
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BM0002
			Chromium	9.6	+00	ug/g	BMX012
			Copper	9.7	+00	ug/g	BMX012

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0010	0-1	Soil	Dibromochloropropane	LT 3. -01	ug/g	BM0002
			Dibromochloropropane	LT 5.0 -03	ug/g	BMR015
			Dicyclopentadiene	LT 1. +00	ug/g	BM0002
			Vapona	LT 3. +00	ug/g	BM0002
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BM0002
			Dithiane	LT 4. -01	ug/g	BM0002
			Diethrin	LT 3. -01	ug/g	BM0002
			Endrin	LT 5. -01	ug/g	BM0002
			Mercury	LT 5.0 -02	ug/g	BMW010
			Isodrin	LT 3. -01	ug/g	BM0002
			Malathion	LT 7. -01	ug/g	BM0002
			1,4-Oxathiane	LT 3. -01	ug/g	BM0002
			Lead	LT 8.4 +00	ug/g	BMX012
			Dichlorodiphenylethane	LT 6. -01	ug/g	BM0002
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BM0002
			Parathion	LT 9. -01	ug/g	BM0002
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BM0002
			Zinc	3.8 +01	ug/g	BMX012
			1,1,1-Trichloroethane	LT 3. -01	ug/g	BM0007
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BM0007
1,1-Dichloroethane	LT 3. -01	ug/g	BM0007			
1,2-Dichloroethane	LT 3. -01	ug/g	BM0007			
1,2-Dichloroethane	LT 3. -01	ug/g	BM0007			
m-Xylene	LT 7. -01	ug/g	BM0007			
Aldrin	LT 3. -01	ug/g	BM0003			
Arsenic	LT 5.0 +00	ug/g	BMS019			
Atrazine	LT 3. -01	ug/g	BM0003			
Bicycloheptadiene	LT 3. -01	ug/g	BM0007			
Benzene	LT 3. -01	ug/g	BM0007			
Carbon Tetrachloride	LT 3. -01	ug/g	BM0007			
Cadmium	LT 7.4 -01	ug/g	BMX013			
Methylene Chloride	LT 7. -01	ug/g	BM0007			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0010	4-5	Soil	Chloroform	LT 3. -01	ug/g	BM0007
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BM0003
			Chlorobenzene	LT 3. -01	ug/g	BM0007
			Chloro-dane	LT 2. +00	ug/g	BM0003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BM0003
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BM0003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BM0003
			Chromium	8.2 +00	ug/g	BMX013
			Copper	6.4 +00	ug/g	BMX013
			Dibromochloropropane	LT 4. -01	ug/g	BM0007
			Dibromochloropropane	LT 3. -01	ug/g	BM0003
			Dibromochloropropane	LT 5.0 -03	ug/g	BMR016
			Dicyclopentadiene	LT 3. -01	ug/g	BM0007
			Dicyclopentadiene	LT 1. +00	ug/g	BM0003
			Vapena	LT 3. +00	ug/g	BM0003
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BM0003
			Dithiane	LT 4. -01	ug/g	BM0003
			Diethrin	LT 3. -01	ug/g	BM0003
			Dimethyldisulfide	LT 8. -01	ug/g	BM0007
			Endrin	LT 5. -01	ug/g	BM0003
			Ethylbenzene	LT 3. -01	ug/g	BM0007
			Mercury	LT 5.0 -02	ug/g	BMW011
			Isodrin	LT 3. -01	ug/g	BM0003
			Toluene	LT 3. -01	ug/g	BM0007
			Methylisobutyl Ketone	LT 3. -01	ug/g	BM0007
			Malathion	LT 7. +01	ug/g	BM0003
			1,4-Oxathiane	LT 3. -01	ug/g	BM0003
			Lead	LT 8.4 +00	ug/g	BMX013
			Dichlorodiphenylethane	LT 6. -01	ug/g	BM0003
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BM0003
Parathion	LT 9. -01	ug/g	BM0003			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BM0003			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0010	4-5	Soil	Tetrachloroethene	LT 3. -01	ug/g	BM0007
			Trichloroethene	LT 3. -01	ug/g	BM0007
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BM0007
			Zinc	2.9 +01	ug/g	BMX013
0011	0-1	Soil	Aldrin	LT 3. -01	ug/g	BMA002
			Arsenic	LT 2.5 +00	ug/g	BMC010
			Atrazine	LT 3. -01	ug/g	BMA002
			Cadmium	LT 7.4 -01	ug/g	BMD010
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMA002
			Chlordane	LT 2. +00	ug/g	BMA002
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMA002
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMA002
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMA002
			Chromium	LT 6.5 +00	ug/g	BMD010
			Copper	LT 4.7 +00	ug/g	BMD010
			Dibromochloropropane	LT 5.0 -03	ug/g	BLM008
			Dibromochloropropane	LT 3. -01	ug/g	BMA002
			Dicyclopentadiene	LT 1. +00	ug/g	BMA002
Vapona	LT 3. +00	ug/g	BMA002			
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMA002
			Dithiane	LT 4. -01	ug/g	BMA002
			Dieldrin	LT 3. -01	ug/g	BMA002
			Endrin	LT 5. -01	ug/g	BMA002
			Mercury	LT 5.0 -02	ug/g	BKK010
			Isodrin	LT 3. -01	ug/g	BMA002
			Malathion	LT 7. -01	ug/g	BMA002
			1,4-Oxathiane	LT 3. -01	ug/g	BMA002
			Lead	LT 8.4 +00	ug/g	BMD010
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMA002
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMA002
			Parathion	LT 9. -01	ug/g	BMA002
			2-Chloro-1(2,4-Dichlorophenyl)	LT 6. -01	ug/g	BMA002
			Vinyl-diethyl Phosphates			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	0-1	Soil	Zinc	1.5 +01	ug/g	BMD010
0011	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BLV004
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BLV004
			1,1-Dichloroethane	LT 2. +00	ug/g	BLV004
			1,2-Dichloroethane	LT 2. +00	ug/g	BLV004
			1,2-Dichloroethane	LT 6. -01	ug/g	BLV004
			m-Xylene	LT 8. -01	ug/g	BLV004
			Aldrin	LT 3. -01	ug/g	BMA003
			Arsenic	LT 2.5 +00	ug/g	BMA003
			Atrazine	LT 3. -01	ug/g	BMA003
			Bicycloheptadiene	LT 4. -01	ug/g	BLV004
			Benzene	LT 3. -01	ug/g	BLV004
			Carbon Tetrachloride	LT 3. -01	ug/g	BLV004
0011	4-5	Soil	Cadmium	LT 7.4 -01	ug/g	BMD011
			Methylene Chloride	LT 2. +00	ug/g	BLV004
			Chloroform	LT 3. -01	ug/g	BLV004
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMA003
			Chlorobenzene	LT 1. +00	ug/g	BLV004
			Chloroethane	LT 2. +00	ug/g	BMA003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMA003
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMA003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMA003
			Chromium	LT 1.7 +01	ug/g	BMD011
			Copper	LT 1.6 +01	ug/g	BMD011
			0011	4-5	Soil	Dibromochloropropane
Dibromochloropropane	LT 5.0 -03	ug/g				BLM009
Dibromochloropropane	LT 3. -01	ug/g				BMA003
Dicyclopentadiene	LT 7. -01	ug/g				BLV004
Dicyclopentadiene	LT 1. +00	ug/g				BMA003
Vapona	LT 3. +00	ug/g				BMA003
Diisopropylmethyl Phosphonate	LT 1. +00	ug/g				BMA003
Dithiane	LT 4. -01	ug/g				BMA003
Dieldrin	LT 3. -01	ug/g				BMA003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0011	4-5	Soil	Dimethyldisulfide	LT 2.	+01	ug/g	BLV004
			Endrin	LT 5.	-01	ug/g	BMA003
			Ethylbenzene	LT 4.	-01	ug/g	BLV004
			Mercury	LT 5.0	-02	ug/g	BKK011
			Isodrin	LT 3.	-01	ug/g	BMA003
			Toluene	LT 3.	-01	ug/g	BLV004
			Methylisobutyl Ketone	LT 7.	-01	ug/g	BLV004
			Malathion	LT 7.	-01	ug/g	BMA003
			1,4-Oxathiane	LT 3.	-01	ug/g	BMA003
			Lead	LT 8.4	+00	ug/g	BMD011
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMA003
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMA003
			Parathion	LT 9.	-01	ug/g	BMA003
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g	BMA003
Tetrachloroethene	LT 3.	-01	ug/g	BLV004			
0011	9-10	Soil	Trichloroethene	LT 5.	-01	ug/g	BLV004
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BLV004
			Zinc	5.0	+01	ug/g	BMD011
			1,1,1-Trichloroethane	LT 4.	-01	ug/g	BLV005
			1,1,2-Trichloroethane	LT 4.	-01	ug/g	BLV005
			1,1-Dichloroethane	LT 2.	+00	ug/g	BLV005
			1,2-Dichloroethane	LT 2.	+00	ug/g	BLV005
			1,2-Dichloroethane	LT 6.	-01	ug/g	BLV005
			m-Xylene	LT 8.	-01	ug/g	BLV005
			Aldrin	LT 3.	-01	ug/g	BMA004
			Arsenic	LT 2.5	+00	ug/g	BMC012
			Atrazine	LT 3.	-01	ug/g	BMA004
			Bicycloheptadiene	LT 4.	-01	ug/g	BLV005
			Benzene	LT 3.	-01	ug/g	BLV005
Carbon Tetrachloride	LT 3.	-01	ug/g	BLV005			
Cadmium	LT 7.4	-01	ug/g	BMD012			
Methylene (chloride)	LT 2.	+00	ug/g	BLV005			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

11/07/86

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemaodon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	9-10	Soil	Chloroform	LT 3.	-01	ug/g
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g
			Chlorobenzene	LT 1.	+00	ug/g
			Chlordane	LT 2.	+00	ug/g
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g
			Chromium	9.2	+00	ug/g
			Copper	9.6	+00	ug/g
			Dibromochloropropane	LT 2.	+00	ug/g
			Dibromochloropropane	LT 5.0	-03	ug/g
			Dibromochloropropane	LT 3.	-01	ug/g
			Dibromochloropropane	LT 7.	-01	ug/g
			Dicyclopentadiene	LT 1.	+00	ug/g
			Dicyclopentadiene	LT 3.	+00	ug/g
			Vapona	LT 1.	+00	ug/g
			Diisopropylmethyl Phosphonate	LT 4.	-01	ug/g
			Dithiane	LT 4.	-01	ug/g
			Diethrin	LT 3.	-01	ug/g
			Dimethyldisulfide	LT 2.	+01	ug/g
			Endrin	LT 5.	-01	ug/g
			Ethylbenzene	LT 4.	-01	ug/g
			Mercury	LT 5.0	-02	ug/g
			Isodrin	LT 3.	-01	ug/g
			Toluene	LT 3.	-01	ug/g
			Methylisobutyl Ketone	LT 7.	-01	ug/g
			Malathion	LT 7.	-01	ug/g
			1,4-Oxathiane	LT 3.	-01	ug/g
			Lead	LT 8.4	+00	ug/g
			Dichlorodiphenylethane	LT 6.	-01	ug/g
Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g			
Parathion	LT 9.	-01	ug/g			
2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	ug/g			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0011	9-10	Soil	Tetrachloroethene	LT 3.	-01	ug/g	BLV005
			Trichloroethene	LT 5.	-01	ug/g	BLV005
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BLV005
			Zinc	LT 3.1	+01	ug/g	BMD012
0012	0-1	Soil	Aldrin	LT 3.	-01	ug/g	BMA008
			Arsenic	LT 2.5	+00	ug/g	BMC016
			Atrazine	LT 3.	-01	ug/g	BMA008
			Cadmium	LT 7.4	-01	ug/g	BMD016
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMA008
			Chlordane	LT 2.	+00	ug/g	BMA008
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMA008
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMA008
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMA008
			Chromium	LT 1.5	+01	ug/g	BMD016
			Copper	LT 1.3	+01	ug/g	BMD016
						Dibromochloropropane	LT 5.0
Dibromochloropropane	LT 3.	-01				ug/g	BMA008
Dicyclopentadiene	LT 1.	+00				ug/g	BMA008
Vapona	LT 3.	+00				ug/g	BMA008
Diisopropylmethyl Phosphonate	LT 1.	+00				ug/g	BMA008
Dithiane	LT 4.	-01				ug/g	BMA008
Dieldrin	LT 3.	-01				ug/g	BMA008
Endrin	LT 5.	-01				ug/g	BMA008
Mercury	LT 5.0	-02				ug/g	BKK016
Isodrin	LT 3.	-01				ug/g	BMA008
Malathion	LT 7.	-01				ug/g	BMA008
1,4-Oxathiane	LT 3.	-01				ug/g	BMA008
			Lead	LT 1.5	+01	ug/g	BMD016
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMA008
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMA008
			Parathion	LT 9.	-01	ug/g	BMA008
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g	BMA008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results Task 7, Site 3-4 Nemaqon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	0-1	Soil	Zinc	5.2 +01	ug/g	BMD016
0012	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BLV008
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BLV008
			1,1-Dichloroethane	LT 2. +00	ug/g	BLV008
			1,2-Dichloroethane	LT 2. +00	ug/g	BLV008
			1,2-Dichloroethane	LT 6. -01	ug/g	BLV008
			m-Xylene	LT 8. -01	ug/g	BLV008
			Aldrin	LT 3. -01	ug/g	BMA009
			Arsenic	LT 2.5 +00	ug/g	BMC017
			Atrazine	LT 3. -01	ug/g	BMA009
			Bicycloheptadiene	LT 4. -01	ug/g	BLV008
			Benzene	LT 3. -01	ug/g	BLV008
			Carbon Tetrachloride	LT 3. -01	ug/g	BLV008
			Cadmium	LT 7.4 -01	ug/g	BMD017
			Methylene Chloride	LT 2. +00	ug/g	BLV008
			Chloroform	LT 3. -01	ug/g	BLV008
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMA009
			Chlorobenzene	LT 1. +00	ug/g	BLV008
			Chlordane	LT 2. +00	ug/g	BMA009
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMA009
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMA009
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMA009
			Chromium	1.4 +01	ug/g	BMD017
			Copper	9.9 +00	ug/g	BMD017
			Dibromochloropropane	LT 2. +00	ug/g	BLV008
			Dibromochloropropane	LT 5.0 -03	ug/g	BLW015
			Dibromochloropropane	LT 3. -01	ug/g	BMA009
			Dicyclopentadiene	LT 7. -01	ug/g	BLV008
			Dicyclopentadiene	LT 1. +00	ug/g	BMA009
			Vapona	LT 3. +00	ug/g	BMA009
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMA009
			Dithiane	LT 4. -01	ug/g	BMA009
			Dieldrin	LT 3. -01	ug/g	BMA009

Note: Results for Dibromochloropropane (DRCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	4-5	Soil	Dimethylsulphide	LT 2. +01	ug/g	BLV008
			Endrin	LT 5. -01	ug/g	BMA009
			Ethylbenzene	LT 4. -01	ug/g	BLV008
			Mercury	LT 5.0 -02	ug/g	BKK017
			Isodrin	LT 3. -01	ug/g	BMA009
			Toluene	LT 3. -01	ug/g	BLV008
			Methylisobutyl Ketone	LT 7. -01	ug/g	BLV008
			Malathion	LT 7. -01	ug/g	BMA009
			1,4-Oxathiane	LT 3. -01	ug/g	BMA009
			Lead	LT 8.4 +00	ug/g	BMD017
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMA009
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMA009
			Parathion	LT 9. -01	ug/g	BMA009
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BMA009
			Tetrachloroethene	LT 3. -01	ug/g	BLV008
			Trichloroethene	LT 5. -01	ug/g	BLV008
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BLV008
Zinc	4.5 +01	ug/g	BMD017			
0012	9-10	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BLZ002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BLZ002
			1,1-Dichloroethane	LT 2. +00	ug/g	BLZ002
			1,2-Dichloroethane	LT 2. +00	ug/g	BLZ002
			1,2-Dichloroethane	LT 6. -01	ug/g	BLZ002
			m-Xylene	LT 8. -01	ug/g	BLZ002
			Aldrin	LT 3. -01	ug/g	BMA010
			Arsenic	LT 2.5 +00	ug/g	BMC018
			Atrazine	LT 3. -01	ug/g	BMA010
			Bicycloheptadiene	LT 4. -01	ug/g	BLZ002
			Benzene	LT 3. -01	ug/g	BLZ002
			Carbon Tetrachloride	LT 3. -01	ug/g	BLZ002
			Cadmium	LT 7.4 -01	ug/g	BMD018
			Methylene Chloride	LT 2. +00	ug/g	BLZ002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	9-10	Soil	Chloroform	LT 3. -01	ug/g	BLZ002
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMA010
			Chlorobenzene	LT 1. +00	ug/g	BLZ002
			Chlordane	LT 2. +00	ug/g	BMA010
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMA010
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMA010
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMA010
			Chromium	LT 6.5 +00	ug/g	BMD018
			Copper	LT 4.7 +00	ug/g	BMD018
			Dibromochloropropane	LT 5.0 -03	ug/g	BLW016
			Dibromochloropropane	LT 2. +00	ug/g	BLZ002
			Dibromochloropropane	LT 3. -01	ug/g	BMA010
			Dicyclopentadiene	LT 7. -01	ug/g	BLZ002
			Dicyclopentadiene	LT 1. +00	ug/g	BMA010
			Vapona	LT 3. +00	ug/g	BMA010
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMA010
			Dithiane	LT 4. -01	ug/g	BMA010
			Dieldrin	LT 3. -01	ug/g	BMA010
			Dimethyldisulfide	LT 2. +01	ug/g	BLZ002
			Endrin	LT 5. -01	ug/g	BMA010
			Ethylbenzene	LT 4. -01	ug/g	BLZ002
			Mercury	LT 5.0 -02	ug/g	BKK018
			Isodrin	LT 3. -01	ug/g	BMA010
			Toluene	LT 3. -01	ug/g	BLZ002
			Methylisobutyl Ketone	LT 7. -01	ug/g	BLZ002
			Malathion	LT 7. -01	ug/g	BMA010
			1,4-Oxathiane	LT 3. -01	ug/g	BMA010
Lead	LT 8.4 +00	ug/g	BMD018			
Dichlorodiphenylethane	LT 6. -01	ug/g	BMA010			
Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMA010			
Parathion	LT 9. -01	ug/g	BMA010			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl Diethyl Phosphates	LT 6. -01	ug/g	BMA010			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	9-10	Soil	Tetrachloroethene	LT 3. -01	ug/g	BLZ002
			Trichloroethene	LT 5. -01	ug/g	BLZ002
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BLZ002
			Zinc	LT 2.3 +01	ug/g	BMD018
0013	0-1	Soil	Aldrin	LT 3. -01	ug/g	BMB002
			Arsenic	LT 2.5 +00	ug/g	BMC019
			Atrazine	LT 3. -01	ug/g	BMB002
			Cadmium	LT 7.4 -01	ug/g	BMD019
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMB002
			Chlordane	LT 2. +00	ug/g	BMB002
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMB002
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMB002
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMB002
			Chromium	LT 6.5 +00	ug/g	BMD019
			Copper	LT 8.7 +00	ug/g	BMD019
			Dibromochloropropane	LT 5.0 -03	ug/g	BLW017
			Dibromochloropropane	LT 3. -01	ug/g	BMB002
			Dicyclopentadiene	LT 1. +00	ug/g	BMB002
Vapona	LT 3. +00	ug/g	BMB002			
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMB002
			Dithiane	LT 4. -01	ug/g	BMB002
			Dieldrin	LT 3. -01	ug/g	BMB002
			Endrin	LT 5. -01	ug/g	BMB002
			Mercury	LT 5.0 -02	ug/g	BKK019
			Isodrin	LT 3. -01	ug/g	BMB002
			Malathion	LT 7. -01	ug/g	BMB002
			1,4-Oxathiane	LT 3. -01	ug/g	BMB002
			Lead	LT 1.1 +01	ug/g	BMD019
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMB002
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMB002
			Parathion	LT 9. -01	ug/g	BMB002
			2-Chloro-1(2,4-Dichlorophenyl)	LT 6. -01	ug/g	BMB002
			Vinyl-diethyl Phosphates			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth, (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0013	0-1	Soil	Zinc	2.8 +01	ug/g	BMD019	
0013	4-5	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g	BLZ003
			1,1,2-Trichloroethane	LT 4.	-01	ug/g	BLZ003
			1,1-Dichloroethane	LT 2.	+00	ug/g	BLZ003
			1,2-Dichloroethane	LT 2.	+00	ug/g	BLZ003
			1,2-Dichloroethane	LT 6.	-01	ug/g	BLZ003
			m-Xylene	LT 8.	-01	ug/g	BLZ003
			Aldrin	LT 3.	-01	ug/g	BMB003
			Arsenic	LT 2.5	+00	ug/g	BMC020
			Atrazine	LT 3.	-01	ug/g	BMB003
			Bicycloheptadiene	LT 4.	-01	ug/g	BLZ003
			Benzene	LT 3.	-01	ug/g	BLZ003
			Carbon Tetrachloride	LT 3.	-01	ug/g	BLZ003
			Cadmium	LT 7.4	-01	ug/g	BMD020
			Methylene Chloride	LT 2.	+00	ug/g	BLZ003
Chloroform	LT 3.	-01	ug/g	BLZ003			
0013			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMB003
			Chlorobenzene	LT 1.	+00	ug/g	BLZ003
			Chloroethane	LT 2.	+00	ug/g	BMB003
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMB003
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMB003
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMB003
			Chromium	9.7	+00	ug/g	BMD020
			Copper	6.3	+00	ug/g	BMD020
			Dibromochloropropane	LT 5.0	-03	ug/g	BLW018
			Dibromochloropropane	LT 2.	+00	ug/g	BLZ003
			Dibromochloropropane	LT 3.	-01	ug/g	BMB003
			Dicyclopentadiene	LT 7.	-01	ug/g	BLZ003
			Dicyclopentadiene	LT 1.	+00	ug/g	BMB003
			Vapona	LT 3.	+00	ug/g	BMB003
Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BMB003			
0013			Dithiane	LT 4.	-01	ug/g	BMB003
			Dieldrin	LT 3.	-01	ug/g	BMB003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number			
0013	4-5	Soil	Dimethylsulfide	LT 2. +01	ug/g	BLZ003			
			Endrin	LT 5. -01	ug/g	BMB003			
			Ethylbenzene	LT 4. -01	ug/g	BLZ003			
			Mercury	LT 5.0 -02	ug/g	BKK020			
			Isodrin	LT 3. -01	ug/g	BMB003			
			Toluene	LT 3. -01	ug/g	BLZ003			
			Methylisobutyl Ketone	LT 7. -01	ug/g	BLZ003			
			Malathion	LT 7. -01	ug/g	BMB003			
			1,4-Oxathiane	LT 3. -01	ug/g	BMB003			
			Lead	LT 8.4 +00	ug/g	BMD020			
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMB003			
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMB003			
			Parathion	LT 9. -01	ug/g	BMB003			
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BMB003			
			Tetrachloroethene	LT 3. -01	ug/g	BLZ003			
			Trichloroethene	LT 5. -01	ug/g	BLZ003			
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BLZ003			
			Zinc	LT 2.7 +01	ug/g	BMD020			
			0013	9-10	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BLZ004
						1,1,2-Trichloroethane	LT 4. -01	ug/g	BLZ004
1,1-Dichloroethane	LT 2. +00	ug/g				BLZ004			
1,2-Dichloroethane	LT 2. +00	ug/g				BLZ004			
1,2-Dichloroethane	LT 6. -01	ug/g				BLZ004			
m-Xylene	LT 8. -01	ug/g				BLZ004			
Aldrin	LT 3. -01	ug/g				BMB004			
Arsenic	LT 2.5 +00	ug/g				BMC021			
Atrazine	LT 3. -01	ug/g				BMB004			
Bicycloheptadiene	LT 4. -01	ug/g				BLZ004			
Benzene	LT 3. -01	ug/g				BLZ004			
Carbon Tetrachloride	LT 3. -01	ug/g				BLZ004			
Cadmium	LT 6.6 -01	ug/g				BMT005			
Methylene Chloride	LT 2. +00	ug/g				BLZ004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0013	9-10	Soil	Chloroform	LT 3. -01	ug/g	BLZ004
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMB004
			Chlorobenzene	LT 1. +00	ug/g	BLZ004
			Chlordane	LT 2. +00	ug/g	BMB004
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMB004
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMB004
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMB004
			Chromium	8.0 +00	ug/g	BMT005
			Copper	8.6 +00	ug/g	BMT005
			Dibromochloropropane	LT 5.0 -03	ug/g	BLW019
			Dibromochloropropane	LT 2. +00	ug/g	BLZ004
			Dibromochloropropane	LT 3. -01	ug/g	BMB004
			Dibromochloropropane	LT 7. -01	ug/g	BLZ004
			Dicyclopentadiene	LT 1. +00	ug/g	BMB004
			Vapona	LT 3. +00	ug/g	BMB004
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMB004
			Dithiane	LT 4. -01	ug/g	BMB004
			Dieldrin	LT 3. -01	ug/g	BMB004
			Dimethyldisulfide	LT 2. +01	ug/g	BLZ004
			Endrin	LT 5. -01	ug/g	BMB004
Ethylbenzene	LT 4. -01	ug/g	BLZ004			
Mercury	LT 5.0 -02	ug/g	BML005			
Isodrin	LT 3. -01	ug/g	BMB004			
Toluene	LT 3. -01	ug/g	BLZ004			
Methylisobutyl Ketone	LT 7. -01	ug/g	BLZ004			
Malathion	LT 7. -01	ug/g	BMB004			
1,4-Oxathiane	LT 3. -01	ug/g	BMB004			
Lead	LT 1.3 +01	ug/g	BMT005			
Dichlorodiphenylethane	LT 6. -01	ug/g	BMB004			
Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMB004			
Parathion	LT 9. -01	ug/g	BMB004			
2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BMB004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0013	9-10	Soil	Tetrachloroethene	LT 3. -01	ug/g	BLZ004
			Trichloroethene	LT 5. -01	ug/g	BLZ004
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BLZ004
			Zinc	LT 3.3 +01	ug/g	BMT005
0014	0-1	Soil	Aldrin	LT 3. -01	ug/g	BLL002
			Arsenic	LT 2.5 +00	ug/g	BMC023
			Atrazine	LT 3. -01	ug/g	BLL002
			Cadmium	LT 6.6 -01	ug/g	BMT006
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL002
			Chlordane	LT 6. -01	ug/g	BLL002
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL002
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BLL002
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL002
			Chromium	LT 5.2 +00	ug/g	BMT006
			Copper	6.6 +00	ug/g	BMT006
			Dibromochloropropane	LT 3. -01	ug/g	BLL002
			Dibromochloropropane	LT 5.0 -03	ug/g	BMF005
Dicyclopentadiene	LT 4. -01	ug/g	BLL002			
Vapona	LT 3. -01	ug/g	BLL002			
Diisopropylmethyl Phosphonate			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BLL002
			Dithiane	LT 7. +00	ug/g	BLL002
			Dieldrin	LT 3. -01	ug/g	BLL002
			Endrin	LT 3. -01	ug/g	BLL002
Mercury			Mercury	LT 5.0 -02	ug/g	BML006
			Isodrin	LT 3. -01	ug/g	BLL002
			Malathion	LT 3. -01	ug/g	BLL002
			1,4-Oxathiane	LT 6. +00	ug/g	BLL002
Lead			Lead	2.3 +01	ug/g	BMT006
			bichlorodiphenylethane	LT 3. -01	ug/g	BLL002
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BLL002
			Parathion	LT 4. -01	ug/g	BLL002
2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g	BLL002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7 . Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	0-1	Soil	Zinc	6.0 +01	ug/g	BMT006
0014	4-5	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	BME002
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BME002
			1,1-Dichloroethane	LT 9. -01	ug/g	BME002
			1,2-Dichloroethane	LT 3. -01	ug/g	BME002
			1,2-Dichloroethane	LT 3. -01	ug/g	BME002
			m-Xylene	LT 7. -01	ug/g	BME002
			Aldrin	LT 3. -01	ug/g	BLL003
			Arsenic	LT 2.5 +00	ug/g	BMC024
			Atrazine	LT 3. -01	ug/g	BLL003
			Bicycloheptadiene	LT 3. -01	ug/g	BME002
			Benzene	LT 3. -01	ug/g	BME002
			Carbon Tetrachloride	LT 3. -01	ug/g	BME002
			Cadmium	LT 6.6 -01	ug/g	BMT007
			Methylene Chloride	LT 7. -01	ug/g	BME002
Chloroform	LT 3. -01	ug/g	BME002			
0014	4-5	Soil	Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL003
			Chlorobenzene	LT 3. -01	ug/g	BME002
			Chlordane	LT 6. -01	ug/g	BLL003
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL003
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BLL003
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL003
			Chromium	6.5 +00	ug/g	BMT007
			Copper	9.2 +00	ug/g	BMT007
			Dibromochloropropane	LT 3. -01	ug/g	BLL003
			Dibromochloropropane	LT 4. -01	ug/g	BME002
0014	4-5	Soil	Dibromochloropropane	LT 5.0 -03	ug/g	BMF006
			Dicyclopentadiene	LT 4. -01	ug/g	BLL003
			Dicyclopentadiene	LT 3. -01	ug/g	BME002
			Vapona	LT 3. -01	ug/g	BLL003
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BLL003
			Dithiane	LT 7. +00	ug/g	BLL003
0014	4-5	Soil	Dieldrin	LT 3. -01	ug/g	BLL003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPU) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0014	4-5	Soil	Dimethylsulfide	LT 8.	-01	ug/g	BME002
			Endrin	LT 3.	-01	ug/g	BLL003
			Ethylbenzene	LT 3.	-01	ug/g	BME002
			Mercury	LT 5.0	-02	ug/g	BML007
			Isodrin	LT 3.	-01	ug/g	BLL003
			Toluene	LT 3.	-01	ug/g	BME002
			Methylisobutyl Ketone	LT 3.	-01	ug/g	BME002
			Malathion	LT 3.	-01	ug/g	BLL003
			1,4-Oxathiane	LT 6.	+00	ug/g	BLL003
			Lead	LT 1.3	+01	ug/g	BMT007
			Dichlorodiphenylethane	LT 3.	-01	ug/g	BLL003
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	BLL003
			Parathion	LT 4.	-01	ug/g	BLL003
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3.	-01	ug/g	BLL003
Tetrachloroethene	LT 3.	-01	ug/g	BME002			
0014	9-10	Soil	Trichloroethene	LT 3.	-01	ug/g	BME002
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	BME002
			Zinc	LT 3.2	+01	ug/g	BMT007
			1,1,1-Trichloroethane	LT 3.	-01	ug/g	BME003
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	BME003
			1,1-Dichloroethane	LT 9.	-01	ug/g	BME003
			1,2-Dichloroethane	LT 3.	-01	ug/g	BME003
			1,2-Dichloroethane	LT 3.	-01	ug/g	BME003
			m-Xylene	LT 7.	-01	ug/g	BME003
			Aldrin	LT 3.	-01	ug/g	BLL004
			Arsenic	LT 2.5	+00	ug/g	BMN005
			Atrazine	LT 3.	-01	ug/g	BLL004
			Bicycloheptadiene	LT 3.	-01	ug/g	BME003
			Benzene	LT 3.	-01	ug/g	BME003
Carbon Tetrachloride	LT 3.	-01	ug/g	BME003			
Cadmium	LT 6.6	-01	ug/g	BMT008			
Methylene Chloride	LT 7.	-01	ug/g	BME003			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	9-10	Soil	Chloroform	LT 3. -01	ug/g	BME003
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL004
			Chlorobenzene	LT 3. -01	ug/g	BME003
			Chloroethane	LT 6. -01	ug/g	BLL004
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL004
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BLL004
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL004
			Chromium	LT 5.2 +00	ug/g	BMT008
			Copper	LT 4.9 +00	ug/g	BMT008
			Dibromochloropropane	LT 3. -01	ug/g	BLL004
			Dibromochloropropane	LT 4. -01	ug/g	BME003
			Dibromochloropropane	LT 5.0 -03	ug/g	BMF007
			Dicyclopentadiene	LT 4. -01	ug/g	BLL004
			Dicyclopentadiene	LT 3. -01	ug/g	BME003
			Vapona	LT 3. -01	ug/g	BLL004
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BLL004
			Dithiane	LT 7. +00	ug/g	BLL004
			Dieldrin	LT 3. -01	ug/g	BLL004
			Dimethyldisulfide	LT 8. -01	ug/g	BME003
			Endrin	LT 3. -01	ug/g	BLL004
			Ethylbenzene	LT 3. -01	ug/g	BME003
			Mercury	LT 5.0 -02	ug/g	BML008
			Isodrin	LT 3. -01	ug/g	BLL004
			Toluene	LT 3. -01	ug/g	BME003
			Methylisobutyl Ketone	LT 3. -01	ug/g	BME003
			Malathion	LT 3. -01	ug/g	BLL004
			1,4-Oxathiane	LT 6. +00	ug/g	BLL004
			Lead	LT 1.3 +01	ug/g	BMT008
			Dichlorodiphenylethane	LT 3. -01	ug/g	BLL004
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BLL004
Parathion	LT 4. -01	ug/g	BLL004			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g	BLL004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	9-10	Soil	Tetrachloroethene	LT 3. -01	ug/g	BME003
			Trichloroethene	LT 3. -01	ug/g	BME003
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BME003
			Zinc	1.7 +01	ug/g	BMT008
0014	14-15	Soil	1,1,1-Trichloroethene	LT 3. -01	ug/g	BME004
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BME004
			1,1-Dichloroethane	LT 9. -01	ug/g	BME004
			1,2-Dichloroethane	LT 3. -01	ug/g	BME004
			1,2-Dichloroethane	LT 3. -01	ug/g	BME004
			m-Xylene	LT 7. -01	ug/g	BME004
			Aldrin	LT 3. -01	ug/g	BLL005
			Arsenic	LT 2.5 +00	ug/g	BMND006
			Atrazine	LT 3. -01	ug/g	BLL005
			Bicycloheptadiene	LT 3. -01	ug/g	BME004
			Benzene	LT 3. -01	ug/g	BME004
			Carbon Tetrachloride	LT 3. -01	ug/g	BME004
			Cadmium	LT 6.6 -01	ug/g	BMT009
			Methylene Chloride	LT 7. -01	ug/g	BME004
Chloroform	LT 3. -01	ug/g	BME004			
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL005
			Chlorobenzene	LT 3. -01	ug/g	BME004
			Chlordane	LT 6. -01	ug/g	BLL005
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL005
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BLL005
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL005
			Chromium	LT 5.2 +00	ug/g	BMT009
			Copper	LT 4.9 +00	ug/g	BMT009
			Dibromochloropropane	LT 3. -01	ug/g	BLL005
			Dibromochloropropane	LT 4. -01	ug/g	BME004
			Dibromochloropropane	LT 5.0 -03	ug/g	BMF008
			Dicyclopentadiene	LT 4. -01	ug/g	BLL005
			Dicyclopentadiene	LT 3. -01	ug/g	BME004
			Vapona	LT 3. -01	ug/g	BLL005
Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BLL005			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nonaqueous Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0014	14-15	Soil	Dithiane	LT 7.	+00	ug/g	BLL005
			Dieldrin	LT 3.	-01	ug/g	BLL005
			Dimethyldisulfide	LT 8.	-01	ug/g	BME004
			Endrin	LT 3.	-01	ug/g	BLL005
			Ethylbenzene	LT 3.	-01	ug/g	BME004
			Mercury	LT 5.0	-02	ug/g	BML009
			Isodrin	LT 3.	-01	ug/g	BLL005
			Toluene	LT 3.	-01	ug/g	BME004
			Methylisobutyl Ketone	LT 3.	-01	ug/g	BME004
			Malathion	LT 3.	-01	ug/g	BLL005
			1,4-Oxathiane	LT 6.	+00	ug/g	BLL005
			Lead	LT 1.3	+01	ug/g	BMT009
			Dichlorodiphenylethane	LT 3.	-01	ug/g	BLL005
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	BLL005
			Parathion	LT 4.	-01	ug/g	BLL005
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3.	-01	ug/g	BLL005
			Tetrachloroethene	LT 3.	-01	ug/g	BME004
			Trichloroethene	LT 3.	-01	ug/g	BME004
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	BME004
			Zinc	1.1	+01	ug/g	BMT009
0014	19-20	Soil	1,1,1-Trichloroethane	LT 3.	-01	ug/g	BME005
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	BME005
			1,1-Dichloroethane	LT 9.	-01	ug/g	BME005
			1,2-Dichloroethene	LT 3.	-01	ug/g	BME005
			1,2-Dichloroethane	LT 3.	-01	ug/g	BME005
			m-Xylene	LT 7.	-01	ug/g	BME005
			Aldrin	LT 3.	-01	ug/g	BLL006
			Arsenic	LT 2.5	+00	ug/g	BMN007
			Atrazine	LT 3.	-01	ug/g	BLL006
			Bicycloheptadiene	LT 3.	-01	ug/g	BME005
			Benzene	LT 3.	-01	ug/g	BME005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	19-20	Soil	Carbon Tetrachloride	LT 3. -01	ug/g	BME005
			Cadmium	LT 6.6 -01	ug/g	BMT010
			Methylene Chloride	LT 1. +00	ug/g	BM0005
			Chloroform	LT 3. -01	ug/g	BME005
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL006
			Chlorobenzene	LT 3. -01	ug/g	BME005
			Chlorodane	LT 6. -01	ug/g	BLL006
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL006
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BLL006
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL006
			Chromium	LT 5.2 +00	ug/g	BMT010
			Copper	LT 4.9 +00	ug/g	BMT010
			Dibromochloropropane	LT 3. -01	ug/g	BLL006
			Dibromochloropropane	LT 4. -01	ug/g	BME005
			Dibromochloropropane	LT 5.0 -03	ug/g	BMF009
			Dicyclopentadiene	LT 4. -01	ug/g	BLL006
			Dicyclopentadiene	LT 3. -01	ug/g	BME005
			Vapona	LT 3. -01	ug/g	BLL006
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BLL006
			Dithiane	LT 7. +00	ug/g	BLL006
Dieldrin	LT 3. -01	ug/g	BLL006			
Dimethyldisulfide	LT 8. -01	ug/g	BME005			
Endrin	LT 3. -01	ug/g	BLL006			
Ethylbenzene	LT 3. -01	ug/g	BME005			
Mercury	LT 5.0 -02	ug/g	BML010			
Isodrin	LT 3. -01	ug/g	BLL006			
Toluene	LT 3. -01	ug/g	BME005			
Methylisobutyl Ketone	LT 3. -01	ug/g	BME005			
Malathion	LT 3. -01	ug/g	BLL006			
1,4-Oxathiane	LT 6. +00	ug/g	BLL006			
Lead	LT 1.3 +01	ug/g	BMT010			
Dichlorodiphenylethane	LT 3. -01	ug/g	BLL006			
Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BLL006			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Rocky Mountain Arsenal Program

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Task 7, Site 3-4 Nemason Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	19-20	Soil	Parathion	LT 4. -01	ug/g	BLL006
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3. -01	ug/g	BLL006
			Trichloroethene	LT 3. -01	ug/g	BME005
			Trichloroethene	LT 3. -01	ug/g	BME005
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BME005
			Zinc	2.0 +01	ug/g	BMT010
			1,1,1-Trichloroethane	LT 3. -01	ug/g	BME006
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BME006
			1,1-Dichloroethane	LT 9. -01	ug/g	BME006
			1,2-Dichloroethane	LT 3. -01	ug/g	BME006
1,2-Dichloroethane	LT 3. -01	ug/g	BME006			
0014	29-30	Soil	m-Xylene	LT 7. -01	ug/g	BME006
			Aldrin	LT 3. -01	ug/g	BLL007
			Arsenic	LT 2.5 +00	ug/g	BMN008
			Atrazine	LT 3. -01	ug/g	BLL007
			Bicycloheptadiene	LT 3. -01	ug/g	BME006
			Benzene	LT 3. -01	ug/g	BME006
			Carbon Tetrachloride	LT 3. -01	ug/g	BME006
			Cadmium	LT 6.6 -01	ug/g	BMT011
			Methylene Chloride	LT 7. -01	ug/g	BME006
			Chloroform	LT 3. -01	ug/g	BME006
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL007
			Chlorobenzene	LT 3. -01	ug/g	BME006
			Chlordane	LT 6. -01	ug/g	BLL007
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL007
			p-Chlorophenylmethyl Sulfide	LT 7. +00	ug/g	BLL007
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL007
			Chromium	LT 5.2 +00	ug/g	BMT011
			Copper	LT 4.9 +00	ug/g	BMT011
			Dibromochloropropane	LT 3. -01	ug/g	BLL007
			Dibromochloropropane	LT 4. -01	ug/g	BME006
			Dibromochloropropane	LT 5.0 -03	ug/g	BMF010

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3.4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0014	29-30	Soil	Dicyclopentadiene	LT 4.	-01	ug/g	BLL007
			Dicyclopentadiene	LT 3.	-01	ug/g	BME006
			Vapona	LT 3.	-01	ug/g	BLL007
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g	BLL007
			Dithiane	LT 7.	+00	ug/g	BLL007
			Dieldrin	LT 3.	-01	ug/g	BLL007
			Dimethyldisulfide	LT 8.	-01	ug/g	BME006
			Endrin	LT 3.	-01	ug/g	BLL007
			Ethylbenzene	LT 3.	-01	ug/g	BME006
			Mercury	LT 5.0	-02	ug/g	BML011
			Isodrin	LT 3.	-01	ug/g	BLL007
			Toluene	LT 3.	-01	ug/g	BME006
			Methylisobutyl Ketone	LT 3.	-01	ug/g	BME006
			Malathion	LT 3.	-01	ug/g	BLL007
			1,4-Oxathiane	LT 6.	+00	ug/g	BLL007
			Lead	LT 1.3	+01	ug/g	BMT011
			Dichlorodiphenylethane	LT 3.	-01	ug/g	BLL007
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	BLL007
			Parathion	LT 4.	-01	ug/g	BLL007
2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3.	-01	ug/g	BLL007			
Tetrachloroethene	LT 3.	-01	ug/g	BME006			
Trichloroethene	LT 3.	-01	ug/g	BME006			
Ortho- & Para-Xylene	LT 3.	-01	ug/g	BME006			
Zinc	1.2	+01	ug/g	BMT011			
0014	39-40	Soil	1,1,1-Trichloroethane	LT 3.	-01	ug/g	BME007
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	BME007
			1,1-Dichloroethane	LT 9.	-01	ug/g	BME007
			1,2-Dichloroethane	LT 3.	-01	ug/g	BME007
			1,2-Dichloroethane	LT 3.	-01	ug/g	BME007
			m-Xylene	LT 7.	-01	ug/g	BME007
			Aldrin	LT 3.	-01	ug/g	BLL008
			Arsenic	LT 2.5	+00	ug/g	BMN009

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Task 7, Site 3.4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	39-40	Soil	Atrazine	LT 3. -01	ug/g	BLL008
			Bicycloheptadiene	LT 3. -01	ug/g	BME007
			Benzene	LT 3. -01	ug/g	BME007
			Carbon Tetrachloride	LT 3. -01	ug/g	BME007
			Cadmium	LT 6.6 -01	ug/g	BMT012
			Methylene Chloride	2. +00	ug/g	BME007
			Chloroform	LT 3. -01	ug/g	BME007
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL008
			Chlorobenzene	LT 3. -01	ug/g	BME007
			Chlordane	LT 6. -01	ug/g	BLL008
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL008
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BLL008
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL008
			Chromium	LT 5.2 +00	ug/g	BMT012
			Copper	LT 4.9 +00	ug/g	BMT012
			Dibromochloropropane	LT 3. -01	ug/g	BLL008
			Dibromochloropropane	LT 4. -01	ug/g	BME007
			Dibromochloropropane	LT 5.0 -03	ug/g	BMF011
			Dicyclopentadiene	LT 4. -01	ug/g	BLL008
			Dicyclopentadiene	LT 3. -01	ug/g	BME007
Vapona	LT 3. -01	ug/g	BLL008			
Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BLL008			
Dithiane	LT 7. +00	ug/g	BLL008			
Dieldrin	LT 3. -01	ug/g	BLL008			
Dimethyldisulfide	LT 8. -01	ug/g	BME007			
Endrin	LT 3. -01	ug/g	BLL008			
Ethylbenzene	LT 3. -01	ug/g	BME007			
Mercury	LT 5.0 -02	ug/g	BML012			
Isodrin	LT 3. -01	ug/g	BLL008			
Toluene	LT 3. -01	ug/g	BME007			
Methylisobutyl Ketone	LT 3. -01	ug/g	BME007			
Malathion	LT 3. -01	ug/g	BLL008			
1,4-Oxathiane	LT 6. +00	ug/g	BLL008			
Lead	LT 1.3 +01	ug/g	BMT012			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7 . Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	39-40	Soil	Dichlorodiphenylethane	LT 3. -01	ug/g	BLL008
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BLL008
			Parathion	LT 4. -01	ug/g	BLL008
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	BLL008
			Tetrachloroethene	LT 3. -01	ug/g	BME007
			Trichloroethene	LT 3. -01	ug/g	BME007
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BME007
			Zinc	1.1 +01	ug/g	BMT012
			1,1,1-Trichloroethane	LT 3. -01	ug/g	BME008
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BME008
			1,1-Dichloroethane	LT 9. -01	ug/g	BME008
			1,2-Dichloroethane	LT 3. -01	ug/g	BME008
			1,2-Dichloroethane	LT 3. -01	ug/g	BME008
			m-Xylene	LT 7. -01	ug/g	BME008
Aldrin	LT 3. -01	ug/g	BLL009			
Arsenic	LT 2.5 +00	ug/g	BMC022			
Atrazine	LT 3. -01	ug/g	BLL009			
Bicycloheptadiene	LT 3. -01	ug/g	BME008			
Benzene	LT 3. -01	ug/g	BME008			
Carbon Tetrachloride	LT 3. -01	ug/g	BME008			
Cadmium	LT 6.6 -01	ug/g	BMT013			
Methylene Chloride	LT 7. -01	ug/g	BME008			
Chloroform	LT 3. -01	ug/g	BME008			
Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL009			
Chlorobenzene	LT 3. -01	ug/g	BME008			
Chlordane	LT 6. -01	ug/g	BLL009			
p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL009			
p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BLL009			
p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL009			
Chromium	LT 5.2 +00	ug/g	BMT013			
Copper	LT 4.9 +00	ug/g	BMT013			
Dibromochloropropane	LT 3. -01	ug/g	BLL009			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0014	49-50	Soil	Dibromochloropropane	LT 4.	-01	ug/g	BME008
			Dibromochloropropane	LT 5.0	-03	ug/g	BMF012
			Dicyclopentadiene	LT 4.	-01	ug/g	BLL009
			Dicyclopentadiene	LT 3.	-01	ug/g	BME008
			Vapona	LT 3.	-01	ug/g	BLL009
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g	BLL009
			Dithiane	LT 7.	+00	ug/g	BLL009
			Dieldrin	LT 3.	-01	ug/g	BLL009
			Dimethyldisulfide	LT 8.	-01	ug/g	BME008
			Endrin	LT 3.	-01	ug/g	BLL009
			Ethylbenzene	LT 3.	-01	ug/g	BME008
			Mercury	LT 5.0	-02	ug/g	BML013
			Isodrin	LT 3.	-01	ug/g	BLL009
			Toluene	LT 3.	-01	ug/g	BME008
Methylisobutyl Ketone	LT 3.	-01	ug/g	BME008			
0014	59-60	Soil	Malathion	LT 3.	-01	ug/g	BLL009
			1,4-Oxathiane	LT 6.	+00	ug/g	BLL009
			Lead	LT 1.3	+01	ug/g	BMT013
			Dichlorodiphenylethane	LT 3.	-01	ug/g	BLL009
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	BLL009
			Parathion	LT 4.	-01	ug/g	BLL009
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3.	-01	ug/g	BLL009
			Tetrachloroethene	LT 3.	-01	ug/g	BME008
			Trichloroethene	LT 3.	-01	ug/g	BME008
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	BME008
			Zinc	1.5	+01	ug/g	BMT013
			1,1,1-Trichloroethane	LT 4.	-01	ug/g	BMH002
			1,1,2-Trichloroethane	LT 4.	-01	ug/g	BMH002
			1,1-Dichloroethane	LT 2.	+00	ug/g	BMH002
1,2-Dichloroethane	LT 2.	+00	ug/g	BMH002			
1,2-Dichloroethane	LT 6.	-01	ug/g	BMH002			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	59-60	Soil	m-Xylene	LT 8.	-01	ug/g
			Aldrin	LT 3.	-01	ug/g
			Arsenic	LT 2.5	+00	ug/g
			Atrazine	LT 3.	-01	ug/g
			Bicycloheptadiene	LT 4.	-01	ug/g
			Benzene	LT 3.	-01	ug/g
			Carbon Tetrachloride	LT 3.	-01	ug/g
			Cadmium	LT 6.6	-01	ug/g
			Methylene Chloride	LT 2.	+00	ug/g
			Chloroform	LT 3.	-01	ug/g
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g
			Chlorobenzene	LT 1.	+00	ug/g
			Chlordane	LT 2.	+00	ug/g
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g
			Chromium	LT 5.2	+00	ug/g
			Copper	LT 4.9	+00	ug/g
			Dibromochloropropane	LT 5.0	-03	ug/g
			Dibromochloropropane	LT 3.	-01	ug/g
			Dibromochloropropane	LT 2.	+00	ug/g
			Bicyclopentadiene	LT 1.	+00	ug/g
			Dicyclopentadiene	LT 7.	-01	ug/g
			Vapona	LT 3.	+00	ug/g
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g
			Dithiane	LT 4.	-01	ug/g
			Dieldrin	LT 3.	-01	ug/g
			Dimethyldisulfide	LT 2.	+01	ug/g
			Endrin	LT 5.	-01	ug/g
			Ethylbenzene	LT 4.	-01	ug/g
			Mercury	LT 5.0	-02	ug/g
			Isodrin	LT 3.	-01	ug/g
			Toluene	LT 3.	-01	ug/g
Methylisobutyl Ketone	LT 7.	-01	ug/g			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results Task 7, Site 3-4 Nemagan Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0014	59-60	Soil	Malathion	LT 7.	-01	ug/g	BMG002
			1,4-Oxathiane	LT 3.	-01	ug/g	BMG002
			Lead	LT 1.3	+01	ug/g	BMT014
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMG002
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMG002
			Parathion	LT 9.	-01	ug/g	BMG002
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g	BMG002
			Tetrachloroethene	LT 3.	-01	ug/g	BMH002
			Trichloroethene	LT 5.	-01	ug/g	BMH002
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BMH002
0015	0-1	Soil	Zinc	1.5	+01	ug/g	BMT014
			Aldrin	LT 3.	-01	ug/g	BMI005
			Arsenic	LT 2.5	+00	ug/g	BMN020
			Atrazine	LT 3.	-01	ug/g	BMI005
			Cadmium	LT 7.4	-01	ug/g	BMX008
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMI005
			Chlordane	LT 2.	+00	ug/g	BMI005
			p-Chlorophenylmethyl Sulfide	LT 9.	+01	ug/g	BMI005
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMI005
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMI005
			Chromium	1.4	+01	ug/g	BMX008
			Copper	8.0	+00	ug/g	BMX008
			Dibromochloropropane	LT 3.	-01	ug/g	BMI005
			Dibromochloropropane	LT 5.0	-03	ug/g	BMK014
			Dicyclopentadiene	LT 1.	+00	ug/g	BMI005
			Vapona	LT 3.	+00	ug/g	BMI005
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BMI005
			Dithiane	LT 4.	-01	ug/g	BMI005
			Diethylin	LT 3.	-01	ug/g	BMI005
			Endrin	LT 5.	-01	ug/g	BMI005
Mercury	LT 5.0	-02	ug/g	BMN008			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0015	0-1	Soil	Isodrin	LT 3.	-01	ug/g	BMI005
			Malathion	LT 7.	-01	ug/g	BMI005
			1,4-Oxathiane	LT 3.	-01	ug/g	BMI005
			Lead	1.3	+01	ug/g	BMX008
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMI005
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMI005
			Parathion	LT 9.	-01	ug/g	BMI005
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g	BMI005
			Zinc	4.6	+01	ug/g	BMX008
			0015	4-5	Soil	1,1,1-Trichloroethane	LT 4.
1,1,2-Trichloroethane	LT 4.	-01				ug/g	BMJ003
1,1-Dichloroethane	LT 2.	+00				ug/g	BMJ003
1,2-Dichloroethane	LT 2.	+00				ug/g	BMJ003
1,2-Dichloroethane	LT 6.	-01				ug/g	BMJ003
m-Xylene	LT 8.	-01				ug/g	BMJ003
Aldrin	LT 3.	-01				ug/g	BMI006
Arsenic	LT 2.5	+00				ug/g	BMND21
Atrazine	LT 3.	-01				ug/g	BMI006
Bicycloheptadiene	LT 4.	-01				ug/g	BMJ003
Benzene	LT 3.	-01				ug/g	BMJ003
Carbon Tetrachloride	LT 3.	-01				ug/g	BMJ003
Cadmium	LT 7.4	-01				ug/g	BMU005
Methylene Chloride	LT 2.	+00				ug/g	BMJ003
Chloroform	LT 3.	-01				ug/g	BMJ003
Hexachlorocyclopentadiene	LT 6.	-01				ug/g	BMI006
Chlorobenzene	LT 1.	+00				ug/g	BMJ003
Chlordane	LT 2.	+00				ug/g	BMI006
p-Chlorophenylmethyl Sulfide	LT 9.	-01				ug/g	BMI006
p-Chlorophenylmethyl Sulfoxide	LT 3.	-01				ug/g	BMI006
p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMI006			
Chromium	1.2	+01	ug/g	BMI005			
Copper	6.1	+00	ug/g	BMU005			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0015	4-5	Soil	Dibromochloropropane	LT 3.	-01	ug/g	BMI006
			Dibromochloropropane	LT 2.	+00	ug/g	BMJ003
			Dibromochloropropane	LT 5.0	-03	ug/g	BMK015
			Dibromochloropropane	LT 1.	+00	ug/g	BMI006
			Dicyclopentadiene	LT 7.	-01	ug/g	BMJ003
			Vapona	LT 3.	+00	ug/g	BMI006
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BMI006
			Dithiane	LT 4.	-01	ug/g	BMI006
			Dieldrin	LT 3.	-01	ug/g	BMI006
			Dimethyldisulfide	LT 2.	+01	ug/g	BMJ003
			Endrin	LT 5.	-01	ug/g	BMI006
			Ethylbenzene	LT 4.	-01	ug/g	BMJ003
			Mercury	LT 5.0	-02	ug/g	BMM009
			Isodrin	LT 3.	-01	ug/g	BMI006
			Toluene	LT 3.	-01	ug/g	BMJ003
			Methylisobutyl Ketone	LT 7.	-01	ug/g	BMJ003
			Malathion	LT 7.	-01	ug/g	BMI006
			1,4-Oxathiane	LT 3.	-01	ug/g	BMI006
			Lead	LT 8.4	+00	ug/g	BMU005
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMI006
Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMI006			
Parathion	LT 9.	-01	ug/g	BMI006			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	ug/g	BMI006			
Tetrachloroethene	LT 3.	-01	ug/g	BMJ003			
Trichloroethene	LT 5.	-01	ug/g	BMJ003			
Ortho- & Para-Xylene	LT 5.	+00	ug/g	BMJ003			
Zinc	2.6	+01	ug/g	BMU005			
0015	9-10	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g	BMJ004
			1,1,2-Trichloroethane	LT 4.	-01	ug/g	BMJ004
			1,1-Dichloroethane	LT 2.	+00	ug/g	BMJ004
			1,2-Dichloroethane	LT 2.	+00	ug/g	BMJ004
			1,2-Dichloroethane	LT 6.	-01	ug/g	BMJ004
			1,2-Dichloroethane	LT 6.	-01	ug/g	BMJ004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemadgon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0015	9-10	Soil	m-Xylene	LT 8.	-01	ug/g	BMJ004
			Aldrin	LT 3.	-01	ug/g	BM1007
			Arsenic	LT 2.5	+00	ug/g	BMN022
			Atrazine	LT 3.	-01	ug/g	BM1007
			Bicycloheptadiene	LT 4.	-01	ug/g	BMJ004
			Benzene	LT 3.	-01	ug/g	BMJ004
			Carbon Tetrachloride	LT 3.	-01	ug/g	BMJ004
			Cadmium	LT 7.4	-01	ug/g	BMU006
			Methylene Chloride	LT 2.	+00	ug/g	BMJ004
			Chloroform	LT 3.	-01	ug/g	BMJ004
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BM1007
			Chlorobenzene	LT 1.	+00	ug/g	BMJ004
			Chlordane	LT 2.	+00	ug/g	BM1007
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BM1007
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BM1007
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BM1007
			Chromium	1.7	+01	ug/g	BMU006
			Copper	9.9	+00	ug/g	BMU006
			Dibromochloropropane	LT 3.	-01	ug/g	BM1007
			Dibromochloropropane	LT 2.	+00	ug/g	BMJ004
Dibromochloropropane	LT 5.0	-03	ug/g	BMK016			
Dicyclopentadiene	LT 1.	+00	ug/g	BM1007			
Dicyclopentadiene	LT 7.	-01	ug/g	BMJ004			
Vapona	LT 3.	+00	ug/g	BM1007			
Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BM1007			
Dithiane	LT 4.	-01	ug/g	BM1007			
Dieldrin	LT 3.	-01	ug/g	BM1007			
Dimethyldisulfide	LT 2.	+01	ug/g	BMJ004			
Endrin	LT 5.	-01	ug/g	BM1007			
Ethylbenzene	LT 4.	-01	ug/g	BMJ004			
Mercury	LT 5.0	-02	ug/g	BMM010			
Isodrin	LT 3.	-01	ug/g	BM1007			
Toluene	LT 3.	-01	ug/g	BMJ004			
Methylisobutyl Ketone	LT 7.	-01	ug/g	BMJ004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nonagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number				
0015	9-10	Soil	Malathion	LT 7.	-01	ug/g	BMI007			
			1,4-Oxathiane	LT 3.	-01	ug/g	BMI007			
			Lead	1.1	+01	ug/g	BMU006			
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMI007			
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMI007			
			Parathion	LT 9.	-01	ug/g	BMI007			
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g	BMI007			
			Tetrachloroethene	LT 3.	-01	ug/g	BMJ004			
			Trichloroethene	LT 5.	-01	ug/g	BMJ004			
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BMJ004			
			Zinc	5.3	+01	ug/g	BMU006			
			0015	14-15	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g	BMJ005
						1,1,2-Trichloroethane	LT 4.	-01	ug/g	BMJ005
						1,1-Dichloroethane	LT 2.	+00	ug/g	BMJ005
1,2-Dichloroethane	LT 2.	+00				ug/g	BMJ005			
1,2-Dichloroethane	LT 6.	-01				ug/g	BMJ005			
m-Xylene	LT 8.	-01				ug/g	BMJ005			
Aldrin	LT 3.	-01				ug/g	BMG009			
Arsenic	LT 2.5	+00				ug/g	BMND23			
Atrazine	LT 3.	-01				ug/g	BMG009			
Bicycloheptadiene	LT 4.	-01				ug/g	BMJ005			
Benzene	LT 3.	-01				ug/g	BMJ005			
Carbon Tetrachloride	LT 3.	-01				ug/g	BMJ005			
Cadmium	LT 7.4	-01				ug/g	BMU007			
Methylene Chloride	LT 2.	+00				ug/g	BMJ005			
Chloroform	LT 3.	-01	ug/g	BMJ005						
0015	14-15	Soil	Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMG009			
			Chlorobenzene	LT 1.	+00	ug/g	BMJ005			
			Chloroethane	LT 2.	+00	ug/g	BMG009			
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMS009			
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMS009			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemaden Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0015	14-15	Soil	p-Chlorophenylmethyl Sulfone	LT 34	-01	BMG009	
			Chromium		1.9	+01	BMU007
			Copper		1.2	+01	BMU007
			Dibromochloropropane	LT 3.	-01	BMG009	
			Dibromochloropropane	LT 2.	+00	BMJ005	
			Dibromochloropropane	LT 5.0	-03	BMK017	
			Dicyclopentadiene	LT 1.	+00	BMG009	
			Dicyclopentadiene	LT 7.	-01	BMJ005	
			Vapona	LT 3.	+00	BMG009	
			Diisopropylmethyl Phosphonate	LT 1.	+00	BMG009	
			Dithiane	LT 4.	-01	BMG009	
			Dieldrin	LT 3.	-01	BMG009	
			Dimethyldisulfide	LT 2.	+01	BMJ005	
			Endrin	LT 5.	-01	BMG009	
			Ethylbenzene	LT 4.	-01	BMJ005	
			Mercury	LT 5.0	-02	BMM011	
			Isodrin	LT 3.	-01	BMG009	
			Toluene	LT 3.	-01	BMJ005	
			Methylisobutyl Ketone	LT 7.	-01	BMJ005	
			Malathion	LT 7.	-01	BMG009	
0015	19-20	Soil	1,4-Oxathiane	LT 3.	-01	BMG009	
			Lead	LT 8.4	+00	BMU007	
			Dichlorodiphenylethane	LT 6.	-01	BMG009	
			Dichlorodiphenyltrichloroethane	LT 5.	-01	BMG009	
			Parathion	LT 9.	-01	BMG009	
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	BMG009	
			Tetrachloroethene	LT 3.	-01	BMJ005	
			Trichloroethene	LT 5.	-01	BMJ005	
			Ortho- & Para-Xylene	LT 5.	+00	BMJ005	
			Zinc	LT 4.3	+01	BMU007	
			1,1,1-Trichloroethane	LT 4.	-01	BMJ006	

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

11/07/86

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3.4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0015	19-20	Soil	1,1,2-Trichloroethane	LT 4.	-01	ug/g
			1,1-Dichloroethane	LT 2.	+00	ug/g
			1,2-Dichloroethane	LT 2.	+00	ug/g
			1,2-Dichloroethane	LT 6.	-01	ug/g
			m-Xylene	LT 8.	-01	ug/g
			Aldrin	LT 3.	-01	ug/g
			Arsenic	LT 2.5	+00	ug/g
			Atrazine	LT 3.	-01	ug/g
			Bicycloheptadiene	LT 4.	-01	ug/g
			Benzene	LT 3.	-01	ug/g
			Carbon Tetrachloride	LT 3.	-01	ug/g
			Cadmium	LT 7.4	-01	ug/g
			Methylene Chloride	LT 2.	+00	ug/g
			Chloroform	LT 3.	-01	ug/g
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g
			Chlorobenzene	LT 1.	+00	ug/g
			Chloroethane	LT 2.	+00	ug/g
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g
Chromium	LT 6.5	+00	ug/g			
Copper	LT 4.7	+00	ug/g			
Dibromochloropropane	LT 3.	-01	ug/g			
Dibromochloropropane	LT 2.	+00	ug/g			
Dibromochloropropane	LT 5.0	-03	ug/g			
Dicyclopentadiene	LT 1.	+00	ug/g			
Dicyclopentadiene	LT 7.	-01	ug/g			
Varona	LT 3.	+00	ug/g			
Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g			
Dithiane	LT 4.	-01	ug/g			
Dieldrin	LT 3.	-01	ug/g			
Dimethyldisulfide	LT 2.	+01	ug/g			
Endrin	LT 5.	-01	ug/g			
Ethylbenzene	LT 4.	-01	ug/g			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemogan Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0015	19-20	Soil	Mercury	LT 5.0 -02	ug/g	BMM012
			Isodrin	LT 3. -01	ug/g	BMG010
			Toluene	LT 3. -01	ug/g	BMJ006
			Methylisobutyl Ketone	LT 7. -01	ug/g	BMJ006
			Malathion	LT 7. -01	ug/g	BMG010
			1,4-Oxathiane	LT 3. -01	ug/g	BMG010
			Lead	LT 8.4 +00	ug/g	BMU008
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMG010
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMG010
			Parathion	LT 9. -01	ug/g	BMG010
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BMG010
			Tetrachloroethene	LT 3. -01	ug/g	BMJ006
			Trichloroethene	LT 5. -01	ug/g	BMJ006
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BMJ006
			Zinc	LT 2.4 +01	ug/g	BMU008
0016	0-1	Soil	Aldrin	LT 3. -01	ug/g	BMG003
			Arsenic	LT 2.5 +00	ug/g	BMN011
			Atrazine	LT 3. -01	ug/g	BMG003
			Cadmium	LT 6.6 -01	ug/g	BMT015
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMG003
			Chlordane	LT 2. +00	ug/g	BMG003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMG003
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMG003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMG003
			Chromium	LT 5.2 +00	ug/g	BMT015
			Copper	LT 4.9 +00	ug/g	BMT015
			Dibromochloropropane	LT 3. -01	ug/g	BMG003
			Dibromochloropropane	LT 5.0 -03	ug/g	BMK005
			Dicyclopentadiene	LT 1. +00	ug/g	BMG003
			Vapona	LT 3. +00	ug/g	BMG003
Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMS003			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number				
0016	0-1	Soil	Dithiane	LT 4.	-01	ug/g	BMG003			
			Dieldrin	LT 3.	-01	ug/g	BMG003			
			Endrin	LT 5.	-01	ug/g	BMG003			
			Mercury	LT 5.0	-02	ug/g	BML015			
			Isodrin	LT 3.	-01	ug/g	BMG003			
			Malathion	LT 7.	-01	ug/g	BMG003			
			1,4-Oxathiane	LT 3.	-01	ug/g	BMG003			
			Lead	LT 1.3	+01	ug/g	BMT015			
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMG003			
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMG003			
			Parathion	LT 9.	-01	ug/g	BMG003			
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g	BMG003			
			Zinc		2.7	+01	ug/g	BMT015		
			0016	4-5	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g	BMH003
						1,1,2-Trichloroethane	LT 4.	-01	ug/g	BMH003
1,1-Dichloroethane	LT 2.	+00				ug/g	BMH003			
1,2-Dichloroethane	LT 2.	+00				ug/g	BMH003			
1,2-Dichloroethane	LT 6.	-01				ug/g	BMH003			
m-Xylene	LT 8.	-01				ug/g	BMH003			
Aldrin	LT 3.	-01				ug/g	BMG004			
Arsenic	LT 2.5	+00				ug/g	BMND12			
Atrazine	LT 3.	-01				ug/g	BMG004			
Bicycloheptadiene	LT 4.	-01				ug/g	BMH003			
Benzene	LT 3.	-01				ug/g	BMH003			
Carbon Tetrachloride	LT 3.	-01				ug/g	BMH003			
Cadmium	LT 6.6	-01				ug/g	BMT016			
Methylene Chloride	LT 2.	+00				ug/g	BMH003			
Chloroform	LT 3.	-01				ug/g	BMH003			
0016	4-5	Soil	Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMG004			
			Chlorobenzene	LT 1.	+00	ug/g	BMH003			
			Chloroethane	LT 2.	+00	ug/g	BMG004			
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMG004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0016	4-5	Soil	p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g
			Chromium	LT 5.2	+00	ug/g
			Copper	LT 4.9	+00	ug/g
			Dibromochloropropane	LT 3.	-01	ug/g
			Dibromochloropropane	LT 2.	+00	ug/g
			Dibromochloropropane	LT 5.0	-03	ug/g
			Dicyclopentadiene	LT 1.	+00	ug/g
			Dicyclopentadiene	LT 7.	-01	ug/g
			Vapona	LT 3.	+00	ug/g
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g
			Dithiane	LT 4.	-01	ug/g
			Dieldrin	LT 3.	-01	ug/g
			Dimethyldisulfide	LT 2.	+01	ug/g
			Endrin	LT 5.	-01	ug/g
			Ethylbenzene	LT 4.	-01	ug/g
			Mercury	LT 5.0	-02	ug/g
			Isodrin	LT 3.	-01	ug/g
			Toluene	LT 3.	-01	ug/g
			Methylisobutyl Ketone	LT 7.	-01	ug/g
Malathion	LT 7.	-01	ug/g			
1,4-Oxathiane	LT 3.	-01	ug/g			
Lead	LT 1.3	+01	ug/g			
Dichlorodiphenylethane	LT 6.	-01	ug/g			
Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g			
Parathion	LT 9.	-01	ug/g			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g			
Tetrachloroethene	LT 3.	-01	ug/g			
Trichloroethene	LT 5.	-01	ug/g			
Ortho- & Para-Xylene	LT 5.	+00	ug/g			
Zinc			1.8 +01	ug/g		
0016	9-10	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0016	9-10	Soil	1,1,2-Trichloroethane	LT 4. -01	ug/g	BMH004
			1,1-Dichloroethane	LT 2. +00	ug/g	BMH004
			1,2-Dichloroethane	LT 2. +00	ug/g	BMH004
			1,2-Dichloroethane	LT 6. -01	ug/g	BMH004
			m-Xylene	LT 8. -01	ug/g	BMH004
			Aldrin	LT 3. -01	ug/g	BMG005
			Arsenic	LT 2.5 +00	ug/g	BMD013
			Atrazine	LT 3. -01	ug/g	BMG005
			Bicycloheptadiene	LT 4. -01	ug/g	BMH004
			Benzene	LT 3. -01	ug/g	BMH004
			Carbon Tetrachloride	LT 3. -01	ug/g	BMH004
			Cadmium	LT 6.6 -01	ug/g	BMT017
			Methylene Chloride	LT 2. +00	ug/g	BMH004
			Chloroform	LT 3. -01	ug/g	BMH004
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMG005
			Chlorobenzene	LT 1. +00	ug/g	BMH004
			Chlordane	LT 2. +00	ug/g	BMG005
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMG005
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMG005
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMG005
			Chromium	LT 5.2 +00	ug/g	BMT017
			Copper	LT 8.4 +00	ug/g	BMT017
			Dibromochloropropane	LT 3. -01	ug/g	BMG005
			Dibromochloropropane	LT 2. +00	ug/g	BMH004
			Dibromochloropropane	LT 5.0 -03	ug/g	BMK007
			Dicyclopentadiene	LT 1. +00	ug/g	BMG005
			Dicyclopentadiene	LT 7. -01	ug/g	BMH004
			Vapona	LT 3. +00	ug/g	BMG005
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMG005
			Dithiane	LT 4. -01	ug/g	BMG005
			Dieldrin	LT 3. -01	ug/g	BMG005
			Dimethyldisulfide	LT 2. +01	ug/g	BMH004
			Endrin	LT 5. -01	ug/g	BMG005
Ethylbenzene	LT 4. -01	ug/g	BMH004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number				
0016	9-10	Soil	Mercury	LT 5.0	-02	ug/g	BML017			
			Isodrin	LT 3.	-01	ug/g	BMG005			
			Toluene	LT 3.	-01	ug/g	BMH004			
			Methylisobutyl Ketone	LT 7.	-01	ug/g	BMH004			
			Malathion	LT 7.	-01	ug/g	BMG005			
			1,4-Oxathiane	LT 3.	-01	ug/g	BMG005			
			Lead	LT 1.3	+01	ug/g	BMT017			
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMG005			
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMG005			
			Parathion	LT 9.	-01	ug/g	BMG005			
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	ug/g	BMG005			
			Tetrachloroethene	LT 3.	-01	ug/g	BMH004			
			Trichloroethene	LT 5.	-01	ug/g	BMH004			
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BMH004			
			Zinc	3.2	+01	ug/g	BMT017			
			0016	14-15	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g	BMH005
						1,1,2-Trichloroethane	LT 4.	-01	ug/g	BMH005
1,1-Dichloroethane	LT 2.	+00				ug/g	BMH005			
1,2-Dichloroethane	LT 2.	+00				ug/g	BMH005			
1,2-Dichloroethane	LT 6.	-01				ug/g	BMH005			
m-Xylene	LT 8.	-01				ug/g	BMH005			
Aldrin	LT 3.	-01				ug/g	BMG006			
Arsenic	LT 2.5	+00				ug/g	BMN014			
Atrazine	LT 3.	-01				ug/g	BMG006			
Bicycloheptadiene	LT 4.	-01				ug/g	BMH005			
Benzene	LT 3.	-01				ug/g	BMH005			
Carbon Tetrachloride	LT 3.	-01				ug/g	BMH005			
Cadmium	LT 6.6	-01				ug/g	BMT018			
Methylene Chloride	LT 2.	+00				ug/g	BMH005			
Chloroform	LT 3.	-01				ug/g	BMH005			
Hexachlorocyclopentadiene	LT 6.	-01				ug/g	BMG006			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Ebasco Services Incorporated Rocky Mountain Arsenal Program
 Summary of Analytical Results Task 7, Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0016	14-15	Soil	Chlorobenzene	LT 1. +00	ug/g	BMH005
			Chloroethane	LT 2. +00	ug/g	BMG006
			p-Chlorophenylmethyl Sulfide	LT 3. -01	ug/g	BMG006
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMG006
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMG006
			Chromium	LT 5.2 +00	ug/g	BMT018
			Copper	6.3 +00	ug/g	BMT018
			Dibromochloropropane	LT 3. -01	ug/g	BMG006
			Dibromochloropropane	LT 2. +00	ug/g	BMH005
			Dibromochloropropane	LT 5.0 -03	ug/g	BMK008
			Dicyclopentadiene	LT 1. +00	ug/g	BMG006
			Dicyclopentadiene	LT 7. -01	ug/g	BMH005
			Vapona	LT 3. +00	ug/g	BMG006
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMG006
			Dithiane	LT 4. -01	ug/g	BMG006
			Dieldrin	LT 3. -01	ug/g	BMG006
			Dimethyldisulfide	LT 2. +01	ug/g	BMH005
			Endrin	LT 5. -01	ug/g	BMG006
			Ethylbenzene	LT 4. -01	ug/g	BMH005
			Mercury	LT 5.0 -02	ug/g	BML018
Isodrin	LT 3. -01	ug/g	BMG006			
Toluene	LT 3. -01	ug/g	BMH005			
Methylisobutyl Ketone	LT 7. -01	ug/g	BMH005			
Malathion	LT 7. -01	ug/g	BMG006			
1,4-Oxathiane	LT 3. -01	ug/g	BMG006			
Lead	LT 1.3 +01	ug/g	BMT018			
Dichlorodiphenylethane	LT 6. -01	ug/g	BMG006			
Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMG006			
Parathion	LT 9. -01	ug/g	BMG006			
2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BMG006			
Tetrachloroethene	LT 3. -01	ug/g	BMH005			
Trichloroethene	LT 5. -01	ug/g	BMH005			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3-4 Nemapon Spill Area

Summary of Analytical Results

Boiling Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0016	14-15	Soil	Ortho- & Para-Xylene Zinc	LT 5.	+00	BMH005 BMT018
				2.4	+01	
0016	19-20	Soil	1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane	LT 4.	-01	BMH006 BMH006 BMH006 BMH006 BMH006
				4.	-01	
				2.	+00	
				2.	+00	
				6.	-01	
				8.	-01	
0016	19-20	Soil	m-Xylene Aldrin Arsenic Atrazine Bicycloheptadiene	LT 3.	-01	BMH006 BMG007 BMN015 BMG007 BMH006
				3.	-01	
				2.5	+00	
				3.	-01	
				4.	-01	
				3.	-01	
				3.	-01	
0016	19-20	Soil	Benzene Carbon Tetrachloride Cadmium Methylene Chloride Chloroform Hexachlorocyclopentadiene Chlorobenzene Chlordane p-Chlorophenylmethyl Sulfide p-Chlorophenylmethyl Sulfoxide p-Chlorophenylmethyl Sulfone Chromium Copper Dibromochloropropane Dibromochloropropane Dibromochloropropane Dicyclopentadiene Dicyclopentadiene Vapona Diisopropylmethyl Phosphonate Dithiane	LT 3.	-01	BMH006 BMH006 BMT019 BMH006 BMH006 BMG007 BMG007 BMG007 BMG007 BMG007 BMG007 BMG007 BMK009 BMG007 BMH006 BMG007 BMG007 BMG007
				3.	-01	
				6.6	-01	
				2.	+00	
				3.	-01	
				3.	-01	
				6.	-01	
				1.	+00	
				2.	+00	
				9.	-01	
				3.	-01	
				3.	-01	
				5.2	+00	
4.9	+00					
3.	-01					
2.	+00					
5.0	-03					
1.	+00					
7.	-01					
3.	+00					
1.	+00					
4.	-01					

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Task 7, Site 3-4 Nemaqon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0016	19-20	Soil	Dieldrin	LT 3. -01	ug/g	BMS007
			Dimethyldisulfide	LT 2. +01	ug/g	BMH006
			Endrin	LT 5. -01	ug/g	BMS007
			Ethylbenzene	LT 4. -01	ug/g	BMH006
			Mercury	LT 5.0 -02	ug/g	BML019
			Isodrin	LT 3. -01	ug/g	BMG007
			Toluene	LT 3. -01	ug/g	BMH006
			Methylisobutyl Ketone	LT 7. -01	ug/g	BMH006
			Malathion	LT 7. -01	ug/g	BMG007
			1,4-Oxathiane	LT 3. -01	ug/g	BMG007
			Lead	LT 1.3 +01	ug/g	BMT019
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMG007
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BMG007
			Parathion	LT 2. -01	ug/g	BMG007
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BMG007
0016	29-30	Soil	Tetrachloroethene	LT 3. -01	ug/g	BMH006
			Trichloroethene	LT 5. -01	ug/g	BMH006
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BMH006
			Zinc	1.4 +01	ug/g	BMT019
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BMH007
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BMH007
			1,1-Dichloroethane	LT 2. +00	ug/g	BMH007
			1,2-Dichloroethane	LT 2. +00	ug/g	BMH007
			1,2-Dichloroethane	LT 6. -01	ug/g	BMH007
			m-Xylene	LT 8. -01	ug/g	BMH007
			Aldrin	LT 3. -01	ug/g	BMG008
			Arsenic	LT 2.5 +00	ug/g	BMN016
			Atrazine	LT 3. -01	ug/g	BMG008
			Bicycloheptadiene	LT 4. -01	ug/g	BMH007
			Benzene	Carbon Tetrachloride	Cadmium	LT 3. -01
LT 3. -01	ug/g	BMH007				
LT 6.6 -01	ug/g	BMT020				

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

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Task 7, Site 3-4 Nemadon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0016	29-30	Soil	Methylene Chloride	LT 2.	+00	ug/g	BMH007
			Chloroform	LT 3.	-01	ug/g	BMH007
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMG008
			Chlorobenzene	LT 1.	+00	ug/g	BMH007
			Chlordane	LT 2.	+00	ug/g	BMG008
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMG008
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMG008
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMG008
			Chromium	LT 5.2	+00	ug/g	BMT020
			Copper	LT 4.9	+00	ug/g	BMT020
			Dibromochloropropane	LT 3.	-01	ug/g	BMG008
			Dibromochloropropane	LT 2.	+00	ug/g	BMH007
			Dibromochloropropane	LT 5.0	-03	ug/g	BMK010
			Dicyclopentadiene	LT 1.	+00	ug/g	BMG008
			Dicyclopentadiene	LT 7.	-01	ug/g	BMH007
			Vapona	LT 3.	+00	ug/g	BMG008
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BMGU08
			Dithiane	LT 4.	-01	ug/g	BMG008
			Dieldrin	LT 3.	-01	ug/g	BMG008
			Dimethyldisulfide	LT 2.	+01	ug/g	BMH007
Endrin	LT 5.	-01	ug/g	BMG008			
Ethylbenzene	LT 4.	-01	ug/g	BMH007			
Mercury	LT 5.0	-02	ug/g	BML020			
Isodrin	LT 3.	-01	ug/g	BMG008			
Toluene	LT 3.	-01	ug/g	BMH007			
Methylisobutyl Ketone	LT 7.	-01	ug/g	BMH007			
Malathion	LT 7.	-01	ug/g	BMG008			
1,4-Oxathiane	LT 3.	-01	ug/g	BMG008			
Lead	LT 1.3	+01	ug/g	BMT020			
Dichlorodiphenylethane	LT 6.	-01	ug/g	BMG008			
Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMG008			
Parathion	LT 9.	-01	ug/g	BMG008			
2-Chloro-1(2,4-dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	ug/g	BMG008			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Ebasco Services Incorporated Rocky Mountain Arsenal Program
 Summary of Analytical Results Task 7, Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0016	29-30	Soil	Tetrachloroethene	LT 3.	-01	ug/g	BMH007
			Trichloroethene	LT 5.	-01	ug/g	BMH007
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BMH007
			Zinc	1.5	+01	ug/g	BMT020
0017	0-1	Soil	Aldrin	LT 3.	-01	ug/g	BMI002
			Arsenic	LT 2.5	+00	ug/g	BMD017
			Atrazine	LT 3.	-01	ug/g	BMI002
			Cadmium	LT 7.4	-01	ug/g	BMX005
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMI002
			Chlordane	LT 2.	+00	ug/g	BMI002
0017	0-1	Soil	p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMI002
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMI002
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMI002
			Chromium	LT 6.5	+00	ug/g	BMX005
			Copper	6.5	+00	ug/g	BMX005
			Dibromochloropropane	LT 3.	-01	ug/g	BMI002
			Dibromochloropropane	LT 5.0	-03	ug/g	BMK011
			Dicyclopentadiene	LT 1.	+00	ug/g	BMI002
			Vapona	LT 3.	+00	ug/g	BMI002
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BMI002
			Dithiane	LT 4.	-01	ug/g	BMI002
			Dieldrin	LT 3.	-01	ug/g	BMI002
0017	0-1	Soil	Endrin	LT 5.	-01	ug/g	BMI002
			Mercury	LT 5.0	-02	ug/g	BMM005
			Isodrin	LT 3.	-01	ug/g	BMI002
			Malathion	LT 7.	-01	ug/g	BMI002
			1,4-Oxathiane	LT 3.	-01	ug/g	BMI002
			Lead	LT 8.4	+00	ug/g	BMX005
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMI002
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMI002
			Parathion	LT 9.	-01	ug/g	BMI002
			2-Chloro-1(2,4-dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g	BMI002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0017	0-1	Soil	Zinc	2.5	+01	ug/g
0017	4-5	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g
			1,1,2-Trichloroethane	LT 4.	-01	ug/g
			1,1-Dichloroethane	LT 2.	+00	ug/g
			1,2-Dichloroethane	LT 2.	+00	ug/g
			1,2-Dichloroethane	LT 6.	-01	ug/g
			1,2-Dichloroethane	LT 6.	-01	ug/g
0017	4-5	Soil	m-Xylene	LT 8.	-01	ug/g
			Aldrin	LT 3.	-01	ug/g
			Arsenic	LT 2.5	+00	ug/g
			Atrazine	LT 3.	-01	ug/g
			Bicycloheptadiene	LT 4.	-01	ug/g
			Benzene	LT 3.	-01	ug/g
			Carbon Tetrachloride	LT 3.	-01	ug/g
			Cadmium	LT 7.4	-01	ug/g
			Methylene Chloride	LT 2.	+00	ug/g
			Chloroform	LT 3.	-01	ug/g
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g
			Chlorobenzene	LT 1.	+00	ug/g
			Chlordane	LT 2.	+00	ug/g
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g
p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g			
0017	4-5	Soil	p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g
			Chromium	LT 6.5	+00	ug/g
			Copper	5.8	+00	ug/g
			Dibromochloropropane	LT 2.	+00	ug/g
			Dibromochloropropane	LT 3.	-01	ug/g
			Dibromochloropropane	LT 5.0	-03	ug/g
			Dicyclopentadiene	LT 7.	-01	ug/g
			Dicyclopentadiene	LT 1.	+00	ug/g
			Vapona	LT 3.	+00	ug/g
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g
0017	4-5	Soil	Dithiane	LT 4.	-01	ug/g
			Dieldrin	LT 3.	-01	ug/g

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0017	4-5	Soil	Dimethylsulfide	LT 2. +01	ug/g	BMH008
			Endrin	LT 5. -01	ug/g	BMI003
			Ethylbenzene	LT 4. -01	ug/g	BMH008
			Mercury	LT 5.0 -02	ug/g	BMM006
			Isodrin	LT 3. -01	ug/g	BMI003
			Toluene	LT 3. -01	ug/g	BMH008
			Methylisobutyl Ketone	LT 7. -01	ug/g	BMH008
			Malathion	LT 7. -01	ug/g	BMI003
			1,4-Oxathiane	LT 3. -01	ug/g	BMI003
			Lead	LT 8.4 +00	ug/g	BMX006
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMI003
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMI003
			Parathion	LT 9. -01	ug/g	BMI003
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BMI003
Tetrachloroethene	LT 3. -01	ug/g	BMH008			
0017	9-10	Soil	Trichloroethene	LT 5. -01	ug/g	BMH008
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BMH008
			Zinc	2.0 +01	ug/g	BMX006
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BMJ002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BMJ002
			1,1-Dichloroethane	LT 2. +00	ug/g	BMJ002
			1,2-Dichloroethene	LT 2. +00	ug/g	BMJ002
			1,2-Dichloroethane	LT 6. -01	ug/g	BMJ002
			m-Xylene	LT 8. -01	ug/g	BMJ002
			Aldrin	LT 3. -01	ug/g	BMI004
			Arsenic	LT 2.5 +00	ug/g	BMN019
			Atrazine	LT 3. -01	ug/g	BMI004
			Bicycloheptadiene	LT 4. -01	ug/g	BMJ002
			Benzene	LT 3. -01	ug/g	BMJ002
Carbon Tetrachloride	LT 3. -01	ug/g	BMJ002			
Cadmium	LT 7.4 -01	ug/g	BMX007			
Methylene Chloride	LT 2. +00	ug/g	BMJ002			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0017	9-10	Soil	Chloroform	LT 3.	-01	ug/g
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g
			Chlorobenzene	LT 1.	+00	ug/g
			Chlordane	LT 2.	+00	ug/g
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g
			Chromium	LT 6.5	+00	ug/g
			Copper	LT 4.7	+00	ug/g
			Dibromochloropropane	LT 3.	-01	ug/g
			Dibromochloropropane	LT 2.	+00	ug/g
			Dibromochloropropane	LT 5.0	-03	ug/g
			Dicyclopentadiene	LT 1.	+00	ug/g
			Dicyclopentadiene	LT 7.	-01	ug/g
			Vapona	LT 3.	+00	ug/g
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g
			Dithiane	LT 4.	-01	ug/g
			Dieldrin	LT 3.	-01	ug/g
			Dimethyldisulfide	LT 2.	+01	ug/g
			Endrin	LT 5.	-01	ug/g
			Ethylbenzene	LT 4.	-01	ug/g
			Mercury	LT 5.0	-02	ug/g
			Isodrin	LT 3.	-01	ug/g
			Toluene	LT 3.	-01	ug/g
			Methylisobutyl Ketone	LT 7.	-01	ug/g
			Malathion	LT 7.	-01	ug/g
1,4-Oxathiane	LT 3.	-01	ug/g			
Lead	LT 8.4	+00	ug/g			
Dichlorodiphenylethane	LT 6.	-01	ug/g			
Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g			
Parathion	LT 9.	-01	ug/g			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	ug/g			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results Task 7, Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0017	9-10	Soil	Tetrachloroethene	LT 3.	-01	ug/g	BMJ002
			Trichloroethene	LT 5.	-01	ug/g	BMJ002
			Ortho- & Para-Xylene	LT 5.	+00	ug/g	BMJ002
			Zinc	2.7	+01	ug/g	BMX007
0018	0-1	Soil	Aldrin	LT 3.	-01	ug/g	BMI008
			Arsenic	LT 5.0	+00	ug/g	BMS005
			Atrazine	LT 3.	-01	ug/g	BMI008
			Cadmium	LT 7.4	-01	ug/g	BMU009
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMI008
			Chlordane	LT 2.	+00	ug/g	BMI008
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMI008
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMI008
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMI008
			Chromium	9.0	+00	ug/g	BMU009
			Copper	5.7	+00	ug/g	BMU009
			Dibromochloropropane	LT 3.	-01	ug/g	BMI008
			Dibromochloropropane	LT 5.0	-03	ug/g	BMK019
			Dicyclopentadiene	LT 1.	+00	ug/g	BMI008
Vapona	LT 3.	+00	ug/g	BMI008			
0017	9-10	Soil	Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BMI008
			Dithiane	LT 4.	-01	ug/g	BMI008
			Dieldrin	LT 3.	-01	ug/g	BMI008
			Endrin	LT 5.	-01	ug/g	BMI008
			Mercury	LT 5.0	-02	ug/g	BMM013
			Isodrin	LT 3.	-01	ug/g	BMI008
			Malathion	LT 7.	-01	ug/g	BMI008
			1,4-Oxathiane	LT 3.	-01	ug/g	BMI008
			Lead	LT 8.4	+00	ug/g	BMU009
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMI008
0018	0-1	Soil	Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMI008
			Parathion	LT 9.	-01	ug/g	BMI008
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	ug/g	BMI008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0018	0-1	Soil	Zinc	2.6 +01	ug/g	BMU009
0018	4-5	Soil	1,1,1-Trichloroethane	LT 4.	-01	BMJ007
			1,1,2-Trichloroethane	LT 4.	-01	BMJ007
			1,1-Dichloroethane	LT 2.	+00	BMJ007
			1,2-Dichloroethane	LT 2.	+00	BMJ007
			1,2-Dichloroethane	LT 6.	-01	BMJ007
			m-Xylene	LT 8.	-01	BMJ007
			Aldrin	LT 3.	-01	BMI009
			Arsenic	LT 5.0	+00	BMS006
			Atrazine	LT 3.	-01	BMI009
			Bicycloheptadiene	LT 4.	-01	BMJ007
			Benzene	LT 3.	-01	BMJ007
			Carbon Tetrachloride	LT 3.	-01	BMJ007
			Cadmium	LT 7.4	-01	BMU010
			Methylene Chloride	LT 2.	+00	BMJ007
			Chloroform	LT 3.	-01	BMJ007
			Hexachlorocyclopentadiene	LT 6.	-01	BMI009
			Chlorobenzene	LT 1.	+00	BMJ007
			Chloroethane	LT 2.	+00	BMJ007
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	BMI009
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	BMI009
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	BMI009
			Chromium	8.0	+00	BMU010
			Copper	LT 4.7	+00	BMU010
			Dibromochloropropane	LT 3.	-01	BMI009
			Dibromochloropropane	LT 2.	+00	BMJ007
			Dibromochloropropane	LT 5.0	-03	BMK020
			Dicyclopentadiene	LT 1.	+00	BMI009
			Dicyclopentadiene	LT 7.	-01	BMJ007
			Vapona	LT 3.	+00	BMI009
			Diisopropylmethyl Phosphonate	LT 1.	+00	BMI009
			Dithiane	LT 4.	-01	BMI009
			Dieldrin	LT 3.	-01	BMI009

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7 . Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0018	4-5	Soil	Dimethyldisulfide	LT 2. +01	ug/g	BMJ007
			Endrin	LT 5. -01	ug/g	BMI009
			Ethylbenzene	LT 4. -01	ug/g	BMJ007
			Mercury	LT 5.0 -02	ug/g	BMM014
			Isodrin	LT 3. -01	ug/g	BMI009
			Toluene	LT 3. -01	ug/g	BMJ007
			Methylisobutyl Ketone	LT 7. -01	ug/g	BMJ007
			Malathion	LT 7. -01	ug/g	BMI009
			1,4-Oxathiane	LT 3. -01	ug/g	BMI009
			Lead	LT 8.4 +00	ug/g	BMU010
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMI009
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMI009
			Parathion	LT 9. -01	ug/g	BMI009
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BMI009
Tetrachloroethene	LT 3. -01	ug/g	BMJ007			
0018	9-10	Soil	Trichloroethene	LT 5. -01	ug/g	BMJ007
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BMJ007
			Zinc	LT 2.5 +01	ug/g	BMU010
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BMJ008
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BMJ008
			1,1-Dichloroethane	LT 2. +00	ug/g	BMJ008
			1,2-Dichloroethane	LT 2. +00	ug/g	BMJ008
			1,2-Dichloroethane	LT 6. -01	ug/g	BMJ008
			m-Xylene	LT 8. -01	ug/g	BMJ008
			Aldrin	LT 3. -01	ug/g	BMI010
			Arsenic	LT 5.0 +00	ug/g	BMS007
			Atrazine	LT 3. -01	ug/g	BMI010
			Bicycloheptadiene	LT 4. -01	ug/g	BMJ008
			Benzene	LT 3. -01	ug/g	BMJ008
Carbon Tetrachloride	LT 3. -01	ug/g	BMJ008			
Cadmium	LT 7.4 -01	ug/g	BMU011			
Methylene Chloride	LT 2. +00	ug/g	BMJ008			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagun Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0018	9-10	Soil	Chloroform	LT 3. -01	ug/g	BMJ008
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMIO10
			Chlorobenzene	LT 1. +00	ug/g	BMJ008
			Chlordane	LT 2. +00	ug/g	BMIO10
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMIO10
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMIO10
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMIO10
			Chromium	1.4 +01	ug/g	BMU011
			Copper	1.2 +01	ug/g	BMU011
			Dibromochloropropane	LT 3. -01	ug/g	BMIO10
			Dibromochloropropane	LT 2. +00	ug/g	BMJ008
			Dibromochloropropane	LT 5.0 -03	ug/g	BMK021
			Dicyclopentadiene	LT 1. +00	ug/g	BMIO10
			Dicyclopentadiene	LT 7. -01	ug/g	BMJ008
			Vapona	LT 3. +00	ug/g	BMIO10
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMIO10
			Dithiane	LT 4. -01	ug/g	BMIO10
			Dieldrin	LT 3. -01	ug/g	BMIO10
			Dimethyldisulfide	LT 2. +01	ug/g	BMJ008
			Endrin	LT 5. -01	ug/g	BMIO10
Ethylbenzene	LT 4. -01	ug/g	BMJ008			
Mercury	LT 5.0 -02	ug/g	BMMD15			
Isodrin	LT 3. -01	ug/g	BMIO10			
Toluene	LT 3. -01	ug/g	BMJ008			
Methylisobutyl Ketone	LT 7. -01	ug/g	BMJ008			
Malathion	LT 7. -01	ug/g	BMIO10			
1,4-Oxathiane	LT 3. -01	ug/g	BMIO10			
Lead	LT 8.4 +00	ug/g	BMU011			
Dichlorodiphenylethane	LT 6. -01	ug/g	BMIO10			
Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMIO10			
Parathion	LT 9. -01	ug/g	BMIO10			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BMIO10			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Ebasco Services Incorporated Rocky Mountain Arsenal Program
 Summary of Analytical Results Task 7, Site 3-4 Namadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0018	9-10	Soil	Tetrachloroethene	LT 3.	.01	ug/g	BMJ008
			Trichloroethene	LT 5.	-.01	ug/g	BMJ008
			Ortho- & Para-Xylene	LT 5.	.400	ug/g	BMJ008
			Zinc	4.2	+01	ug/g	BMU011
0019	0-1	Soil	Aldrin	LT 3.	-.01	ug/g	BMP002
			Arsenic	LT 5.0	+00	ug/g	BMS008
			Atrazine	LT 3.	-.01	ug/g	BMP002
			Cadmium	LT 7.4	-.01	ug/g	BMU012
			Hexachlorocyclopentadiene	LT 3.	-.01	ug/g	BMP002
			Chlordane	LT 6.	-.01	ug/g	BMP002
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	BMP002
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	BMP002
			p-Chlorophenylmethyl Sulfone	LT 6.	-.01	ug/g	BMP002
			Chromium	1.4	+01	ug/g	BMU012
			Copper	1.3	+01	ug/g	BMU012
			0019	0-1	Soil	Dibromochloropropane	LT 3.
Dibromochloropropane	LT 5.0	-.03				ug/g	BMR005
Dicyclopentadiene	LT 4.	-.01				ug/g	BMP002
Yapona	LT 3.	-.01				ug/g	BMP002
Diisopropylmethyl Phosphonate	LT 3.	-.01				ug/g	BMP002
Dithiane	LT 7.	+00				ug/g	BMP002
Dieldrin	LT 3.	-.01				ug/g	BMP002
Endrin	LT 3.	-.01				ug/g	BMP002
Mercury	LT 5.0	-.02				ug/g	BMM016
Isodrin	LT 3.	-.01				ug/g	BMP002
0019	0-1	Soil	Malathion	LT 3.	-.01	ug/g	BMP002
			1,4-Oxathiane	LT 6.	+00	ug/g	BMP002
			Lead	LT 8.4	+00	ug/g	BMU012
			Dichlorodiphenylethane	LT 3.	-.01	ug/g	BMP002
			Dichlorodiphenyltrichloro-ethane	LT 6.	-.01	ug/g	BMP002
			Parathion	LT 4.	-.01	ug/g	BMP002
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-.01	ug/g	BMP002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0019	0-1	Soil	Zinc	4.7 +01	ug/g	BMU012	
0019	4-5	Soil	1,1,1-Trichloroethane	LT 3.	-01	ug/g	BM0002
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	BM0002
			1,1-Dichloroethane	LT 9.	-01	ug/g	BM0002
			1,2-Dichloroethane	LT 3.	-01	ug/g	BM0002
			1,2-Dichloroethane	LT 3.	-01	ug/g	BM0002
			m-Xylene	LT 7.	-01	ug/g	BM0002
			Aldrin	LT 3.	-01	ug/g	BMP003
			Arsenic	LT 5.0	+00	ug/g	BMS009
			Atrazine	LT 3.	-01	ug/g	BMP003
			Bicycloheptadiene	LT 3.	-01	ug/g	BM0002
			Benzene	LT 3.	-01	ug/g	BM0002
			Carbon Tetrachloride	LT 3.	-01	ug/g	BM0002
			Cadmium	LT 7.4	-01	ug/g	BMU013
			Methylene Chloride	LT 7.	-01	ug/g	BM0002
			Chloroform	LT 3.	-01	ug/g	BM0002
			Hexachlorocyclopentadiene	LT 3.	-01	ug/g	BMP003
			Chlorobenzene	LT 3.	-01	ug/g	BM0002
			Chlordane	LT 6.	-01	ug/g	BMP003
p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	BMP003			
p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	BMP003			
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	BMP003
			Chromium	LT 6.5	+00	ug/g	BMU013
			Copper	LT 4.7	+00	ug/g	BMU013
			Dibromochloropropane	LT 4.	-01	ug/g	BM0002
			Dibromochloropropane	LT 3.	-01	ug/g	BMP003
			Dibromochloropropane	LT 5.0	-03	ug/g	BMR006
			Dicyclopentadiene	LT 3.	-01	ug/g	BM0002
			Dicyclopentadiene	LT 4.	-01	ug/g	BMP003
			Vapona	LT 3.	-01	ug/g	BMP003
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g	BMP003
			Dithiane	LT 7.	+00	ug/g	BMP003
			Dieldrin	LT 3.	-01	ug/g	BMP003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Ebasco Services Incorporated Rocky Mountain Arsenal Program
 Summary of Analytical Results Task 7, Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0019	4-5	Soil	Dimethyldisulfide	LT 8.	-01	ug/g	BM0002
			Endrin	LT 3.	-01	ug/g	BMP003
			Ethylbenzene	LT 3.	-01	ug/g	BM0002
			Mercury	LT 5.0	-02	ug/g	BMM017
			Isodrin	LT 3.	-01	ug/g	BMP003
			Toluene	LT 3.	-01	ug/g	BM0002
			Methylisobutyl Ketone	LT 3.	-01	ug/g	BM0002
			Malathion	LT 3.	-01	ug/g	BMP003
			1,4-Oxathiane	LT 6.	+00	ug/g	BMP003
			Lead	LT 8.4	+00	ug/g	BMU013
			Dichlorodiphenylethane	LT 3.	-01	ug/g	BMP003
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	BMP003
			Parathion	LT 4.	-01	ug/g	BMP003
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	ug/g	BMP003
Tetrachloroethene	LT 3.	-01	ug/g	BM0002			
0020	0-1	Soil	Trichloroethene	LT 3.	-01	ug/g	BM0002
			Ortho- & Para-Xylene	LT 3.	-01	ug/g	BM0002
			Zinc	2.4	+01	ug/g	BMU013
			Aldrin	LT 3.	-01	ug/g	BMP004
			Arsenic	LT 5.0	+00	ug/g	BMS010
			Atrazine	LT 3.	-01	ug/g	BMP004
			Cadmium	LT 7.4	-01	ug/g	BMU014
			Hexachlorocyclopentadiene	LT 3.	-01	ug/g	BMP004
			Chlordane	LT 6.	-01	ug/g	BMP004
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	BMP004
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	BMP004
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	BMP004
			Chromium	1.6	+01	ug/g	BMU014
			Copper	1.2	+01	ug/g	BMU014
Dibromochloropropane	LT 3.	-01	ug/g	BMP004			
Dibromochloropropane	LT 5.0	-03	ug/g	BMR007			
Dicyclopentadiene	LT 4.	-01	ug/g	BMP004			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0020	0-1	Soil	Vapona	LT 3.	-01	ug/g	BMP004
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g	BMP004
			Dithiane	LT 7.	+00	ug/g	BMP004
			Dieldrin	LT 3.	-01	ug/g	BMP004
			Endrin	LT 3.	-01	ug/g	BMP004
			Mercury	LT 5.0	-02	ug/g	BMM018
			Isodrin	LT 3.	-01	ug/g	BMP004
			Malathion	LT 3.	-01	ug/g	BMP004
			1,4-Oxathiane	LT 6.	+00	ug/g	BMP004
			Lead	1.3	+01	ug/g	BMU014
			Dichlorodiphenylethane	LT 3.	-01	ug/g	BMP004
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	BMP004
			Parathion	LT 4.	-01	ug/g	BMP004
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	ug/g	BMP004
Zinc	4.6	+01	ug/g	BMU014			
0020	4-5	Soil	1,1,1-Trichloroethane	LT 3.	-01	ug/g	BM0003
			1,1,2-Trichloroethane	LT 3.	-01	ug/g	BM0003
			1,1-Dichloroethane	LT 9.	-01	ug/g	BM0003
			1,2-Dichloroethane	LT 3.	-01	ug/g	BM0003
			1,2-Dichloroethane	LT 3.	-01	ug/g	BM0003
			m-Xylene	LT 7.	-01	ug/g	BM0003
			Aldrin	LT 3.	-01	ug/g	BMP005
			Arsenic	LT 5.0	+00	ug/g	BMS011
			Atrazine	LT 3.	-01	ug/g	BMP005
			Bicycloheptadiene	LT 3.	-01	ug/g	BM0003
			Benzene	LT 3.	-01	ug/g	BM0003
			Carbon Tetrachloride	LT 3.	-01	ug/g	BM0003
			Cadmium	LT 7.4	-01	ug/g	BMU015
			Methylene Chloride	LT 7.	-01	ug/g	BM0003
Chloroform	LT 3.	-01	ug/g	BM0003			
Hexachlorocyclopentadiene	LT 3.	-01	ug/g	BMP005			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3-4 Nemaqon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number		
0020	4-5	Soil	Chlorobenzene	LT 3.	-01	ug/g	BM0003	
			Chlordane	LT 6.	-01	ug/g	BMP005	
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	BMP005	
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	BMP005	
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	BMP005	
			Chromium		2.1	+01	ug/g	BMU015
			Copper		1.5	+01	ug/g	BMU015
			Dibromochloropropane	LT 4.	-01	ug/g	BM0003	
			Dibromochloropropane	LT 3.	-01	ug/g	BMP005	
			Dibromochloropropane	LT 5.0	-03	ug/g	BMR008	
			Dicyclopentadiene	LT 3.	-01	ug/g	BM0003	
			Dicyclopentadiene	LT 4.	-01	ug/g	BMP005	
			Vapona	LT 3.	-01	ug/g	BMP005	
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g	BMP005	
			Dithiane	LT 7.	+00	ug/g	BMP005	
			Dieldrin	LT 3.	-01	ug/g	BMP005	
			Dimethyldisulfide	LT 8.	-01	ug/g	BM0003	
			Endrin	LT 3.	-01	ug/g	BMP005	
			Ethylbenzene	LT 3.	-01	ug/g	BM0003	
			Mercury	LT 5.0	-02	ug/g	BMM019	
			Isodrin	LT 3.	-01	ug/g	BMP005	
			Toluene	LT 3.	-01	ug/g	BM0003	
			Methylisobutyl Ketone	LT 3.	-01	ug/g	BM0003	
			Malathion	LT 3.	-01	ug/g	BMP005	
			1,4-Oxathiane	LT 6.	+00	ug/g	BMP005	
			Lead	LT 8.4	+00	ug/g	BMU015	
			Dichlorodiphenylethane	LT 3.	-01	ug/g	BMP005	
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	BMP005	
			Parathion	LT 4.	-01	ug/g	BMP005	
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidieethyl Phosphates	LT 3.	-01	ug/g	BMP005	
			Tetrachloroethene	LT 3.	-01	ug/g	BM0003	
			Trichloroethene	LT 3.	-01	ug/g	BM0003	

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0020	4-5	Soil	Ortho- & Para-Xylene Zinc	LT 3. -01	ug/g	BMP003
				5.2 +01	ug/g	BMU015
0021	0-1	Soil	Aldrin Arsenic Atrazine Cadmium Hexachlorocyclopentadiene Chlordane p-Chlorophenylmethyl Sulfide p-Chlorophenylmethyl Sulfoxide p-Chlorophenylmethyl Sulfone Chromium Copper Dibromochloropropane Dibromochloropropane Dicyclopentadiene Vapona Diisopropylmethyl Phosphonate Dithiane Dieldrin Endrin Mercury Isodrin Malathion 1,4-Oxathiane Lead Dichlorodiphenylethane Dichlorodiphenyltrichloro- ethane Parathion 2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates Zinc	LT 3. -01	ug/g	BMP006
				5.0 +00	ug/g	BMS012
				3. -01	ug/g	BMP006
				7.4 -01	ug/g	BMU016
				3. -01	ug/g	BMP006
				6. -01	ug/g	BMP006
				4. +00	ug/g	BMP006
				7. +00	ug/g	BMP006
				6. -01	ug/g	BMP006
				9.5 +00	ug/g	BMU016
				6.2 +00	ug/g	BMU016
				3. -01	ug/g	BMP006
				5.0 -03	ug/g	BMR009
				4. -01	ug/g	BMP006
3. -01	ug/g	BMP006				
5.0 -02	ug/g	BMM020				
3. -01	ug/g	BMP006				
7. +00	ug/g	BMP006				
3. -01	ug/g	BMP006				
6. +00	ug/g	BMP006				
8.4 +00	ug/g	BMU016				
3. -01	ug/g	BMP006				
6. -01	ug/g	BMP006				
4. -01	ug/g	BMP006				
3. -01	ug/g	BMP006				
2.6 +01	ug/g	BMU016				
3. -01	ug/g	BM0004				

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0021	4-5	Soil	1,1,2-Trichloroethane	LT 3.	-01	ug/g	
			1,1-Dichloroethane	LT 9.	-01	ug/g	
			1,2-Dichloroethane	LT 3.	-01	ug/g	
			1,2-Dichloroethane	LT 3.	-01	ug/g	
			m-Xylene	LT 7.	-01	ug/g	
			Aldrin	LT 3.	-01	ug/g	
			Arsenic	LT 5.0	+00	ug/g	
			Atrazine	LT 3.	-01	ug/g	
			Bicycloheptadiene	LT 3.	-01	ug/g	
			Benzene	LT 3.	-01	ug/g	
			Carbon Tetrachloride	LT 3.	-01	ug/g	
			Cadmium	LT 7.4	-01	ug/g	
			Methylene Chloride	LT 7.	-01	ug/g	
			Chloroform	LT 3.	-01	ug/g	
			Hexachlorocyclopentadiene	LT 3.	-01	ug/g	
			Chlorobenzene	LT 3.	-01	ug/g	
			Chlordane	LT 6.	-01	ug/g	
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g	
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g	
			Chromium		1.2	+01	ug/g
			Copper		1.3	+01	ug/g
			Dibromochloropropane	LT 4.	-01	ug/g	
			Dibromochloropropane	LT 3.	-01	ug/g	
			Dibromochloropropane	LT 5.0	-03	ug/g	
			Dicyclopentadiene	LT 3.	-01	ug/g	
			Dicyclopentadiene	LT 4.	-01	ug/g	
Vapona	LT 3.	-01	ug/g				
Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g				
Dithiane	LT 7.	+00	ug/g				
Dieldrin	LT 3.	-01	ug/g				
Dimethyldisulfide	LT 8.	-01	ug/g				
Endrin	LT 3.	-01	ug/g				
Ethylbenzene	LT 3.	-01	ug/g				

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number			
0021	4-5	Soil	Mercury	LT 5.0 -02	ug/g	BMU005			
			Isodrin	LT 3. -01	ug/g	BMP007			
			Toluene	LT 3. -01	ug/g	BM0004			
			Methylisobutyl ketone	LT 3. -01	ug/g	EM0004			
			Malathion	LT 3. -01	ug/g	BMP007			
			1,4-Oxathiane	LT 6. +00	ug/g	BMP007			
			Lead	LT 8.4 +00	ug/g	BMU017			
			Dichlorodiphenylethane	LT 3. -01	ug/g	BMP007			
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BMP007			
			Parathion	LT 4. -01	ug/g	BMP007			
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g	BMP007			
			Tetrachloroethene	LT 3. -01	ug/g	BM0004			
			Trichloroethene	LT 3. -01	ug/g	BM0004			
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BM0004			
			Zinc	4.7 +01	ug/g	BMU017			
			0022	0-1	Soil	Aldrin	LT 3. -01	ug/g	BMP008
						Arsenic	LT 5.0 +00	ug/g	BMS014
						Atrazine	LT 3. -01	ug/g	BMP008
						Cadmium	LT 7.4 -01	ug/g	BMU018
						Hexachlorocyclopentadiene	LT 3. -01	ug/g	BMP008
Chlordane	LT 6. -01	ug/g				BMP008			
p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g				BMP008			
p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g				BMP008			
p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g				BMP008			
Chromium	LT 6.5 +00	ug/g				BMU018			
Copper	LT 4.7 +00	ug/g				BMU018			
Dibromochloropropane	LT 3. -01	ug/g				BMP008			
Dibromochloropropane	LT 5.0 -03	ug/g				BMR011			
Dicyclopentadiene	LT 4. -01	ug/g				BMP008			
Vapona	LT 3. -01	ug/g				BMP008			
Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BMP008						

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

11/07/86

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemaqon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number		
0022	0-1	Soil	Dithiane	LT 7.	+00	ug/g	BMP008	
			Diieldrin	LT 3.	-01	ug/g	BMP008	
			Endrin	LT 3.	-01	ug/g	BMP008	
			Mercury	LT 5.0	-02	ug/g	BMP006	
			Isodrin	LT 3.	-01	ug/g	BMP008	
			Malathion	LT 3.	-01	ug/g	BMP008	
			1,4-Oxathiane	LT 6.	+00	ug/g	BMP008	
			Lead	LT 8.4	+00	ug/g	BMP008	
			Dichlorodiphenylethane	LT 3.	-01	ug/g	BMP008	
			Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g	BMP008	
			Parathion	LT 4.	-01	ug/g	BMP008	
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	ug/g	BMP008	
			Zinc		2.8	+01	ug/g	BMU018
			0022	4-5	Soil	1,1,1-Trichloroethane	LT 3.	-01
1,1,2-Trichloroethane	LT 3.	-01				ug/g	BM0005	
1,1-Dichloroethane	LT 9.	-01				ug/g	BM0005	
1,2-Dichloroethane	LT 3.	-01				ug/g	BM0005	
1,2-Dichloroethane	LT 3.	-01				ug/g	BM0005	
m-Xylene	LT 7.	-01				ug/g	BM0005	
Aldrin	LT 3.	-01				ug/g	BMP009	
Arsenic	LT 5.0	+00				ug/g	BMS015	
Atrazine	LT 3.	-01				ug/g	BMP009	
Bicycloheptadiene	LT 3.	-01				ug/g	BM0005	
Benzene	LT 3.	-01				ug/g	BM0005	
Carbon Tetrachloride	LT 3.	-01				ug/g	BM0005	
Cadmium	LT 7.4	-01				ug/g	BMU019	
Methylene Chloride	LT 7.	-01				ug/g	BM0005	
Chloroform	LT 3.	-01	ug/g	BM0005				
0022	4-5	Soil	Hexachlorocyclopentadiene	LT 3.	-01	ug/g	BMP009	
			Chlorobenzene	LT 3.	-01	ug/g	BM0005	
			Chlordane	LT 6.	-01	ug/g	BMP009	
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	ug/g	BMP009	

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0022	4-5	Soil	p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	ug/g
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	ug/g
			Chromium	1.1	+01	ug/g
			Copper	6.6	+00	ug/g
			Dibromochloropropane	LT 4.	-01	ug/g
			Dibromochloropropane	LT 3.	-01	ug/g
			Dibromochloropropane	LT 5.0	-03	ug/g
			Dicyclopentadiene	LT 3.	-01	ug/g
			Dicyclopentadiene	LT 4.	-01	ug/g
			Vapona	LT 3.	-01	ug/g
			Diisopropylmethyl Phosphonate	LT 3.	-01	ug/g
			Dithiane	LT 7.	+00	ug/g
			Dieldrin	LT 3.	-01	ug/g
			Dimethyldisulfide	LT 8.	-01	ug/g
			Endrin	LT 3.	-01	ug/g
			Ethylbenzene	LT 3.	-01	ug/g
			Mercury	LT 5.0	-02	ug/g
			Isodrin	LT 3.	-01	ug/g
			Toluene	LT 3.	-01	ug/g
			Methylisobutyl Ketone	LT 3.	-01	ug/g
			Malathion	LT 3.	-01	ug/g
			1,4-Oxathiane	LT 6.	+00	ug/g
			Lead	LT 8.4	+00	ug/g
Dichlorodiphenylethane	LT 3.	-01	ug/g			
Dichlorodiphenyltrichloroethane	LT 6.	-01	ug/g			
Parathion	LT 4.	-01	ug/g			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3.	-01	ug/g			
Tetrachloroethene	LT 3.	-01	ug/g			
Trichloroethene	LT 3.	-01	ug/g			
Ortho- & Para-Xylene	LT 3.	-01	ug/g			
Zinc	3.1	+01	ug/g			
0023	0-1	Soil	Aldrin	LT 3.	-01	ug/g

Note: Results for Dibromochloropropane (DECP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nonagen Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0023	0-1	Soil	Arsenic	LT 5.0 +00	ug/g	BMS016
			Atrazine	LT 3. -01	ug/g	BMP010
			Cadmium	LT 7.4 -01	ug/g	BMU020
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BMP010
			Chlordane	LT 6. -01	ug/g	BMP010
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BMP010
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BMP010
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BMP010
			Chromium	9.9 +00	ug/g	BMU020
			Copper	6.0 +00	ug/g	BMU020
			Dibromochloropropane	LT 3. -01	ug/g	BMP010
			Dibromochloropropane,	LT 5.0 -03	ug/g	BMR013
			Dicyclopentadiene	LT 4. -01	ug/g	BMP010
			Vapona	LT 3. -01	ug/g	BMP010
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BMP010
			Dithiane	LT 7. +00	ug/g	BMP010
Diendrin	LT 3. -01	ug/g	BMP010			
Endrin	LT 3. -01	ug/g	BMP010			
Mercury	LT 5.0 -02	ug/g	BMU008			
Isodrin	LT 3. -01	ug/g	BMP010			
Malathion	LT 3. -01	ug/g	BMP010			
1,4-Oxathiane	LT 6. +00	ug/g	BMP010			
Lead	LT 8.4 +00	ug/g	BMU020			
Dichlorodiphenylethane	LT 3. -01	ug/g	BMP010			
Dichlorodiphenyltrichloro-ethane	LT 6. -01	ug/g	BMP010			
Parathion	LT 4. -01	ug/g	BMP010			
2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3. -01	ug/g	BMP010			
Zinc	3.2 +01	ug/g	BMU020			
0023	4-5	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	BM0006
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BM0006
			1,1-Dichloroethane	LT 9. -01	ug/g	BM0006
			1,2-Dichloroethane	LT 3. -01	ug/g	BM0006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7 . Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0023	4-5	Soil	1,2-Dichloroethane	LT 3. -01	ug/g	BM0006
			m-Xylene	LT 7. -01	ug/g	BM0006
			Aldrin	LT 3. -01	ug/g	BMP011
			Arsenic	LT 5.0 +00	ug/g	BMS017
			Atrazine	LT 3. -01	ug/g	BMP011
			Bicycloheptadiene	LT 3. -01	ug/g	BM0006
			Benzene	LT 3. -01	ug/g	BM0006
			Carbon Tetrachloride	LT 3. -01	ug/g	BM0006
			Cadmium	LT 7.4 -01	ug/g	BMX011
			Methylene Chloride	LT 7. -01	ug/g	BM0006
			Chloroform	LT 3. -01	ug/g	BM0006
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BMP011
			Chlorobenzene	LT 3. -01	ug/g	BM0006
			Chlordane	LT 6. -01	ug/g	BMP011
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BMP011
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BMP011
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BMP011
			Chromium	LT 6.5 +00	ug/g	BMX011
			Copper	8.4 +00	ug/g	BMX011
			Dibromochloropropane	LT 4. -01	ug/g	BM0006
			Dibromochloropropane	LT 3. -01	ug/g	BMP011
			Dibromochloropropane	LT 5.0 -03	ug/g	BMRO14
			Dicyclopentadiene	LT 3. -01	ug/g	BM0006
Dicyclopentadiene	LT 4. -01	ug/g	BMP011			
Vapona	LT 3. -01	ug/g	BMP011			
Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BMP011			
Dithiane	LT 7. +00	ug/g	BMP011			
Dieldrin	LT 3. -01	ug/g	BMP011			
Dimethyldisulfide	LT 8. -01	ug/g	BM0006			
Endrin	LT 3. -01	ug/g	BMP011			
Ethylbenzene	LT 3. -01	ug/g	BM0006			
Mercury	LT 5.0 -02	ug/g	BMW009			
Isodrin	LT 3. -01	ug/g	BMP011			
Toluene	LT 3. -01	ug/g	BM0006			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 7, Site 3-4 Nemacon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number			
0023	4-5	Soil	Methylisobutyl Ketone	LT 3. -01	ug/g	BM0006			
			Malathion	LT 3. -01	ug/g	BMP011			
			1,4-Oxathiane	LT 6. +00	ug/g	BMP011			
			Lead	1.4 +01	ug/g	BMX011			
			Dichlorodiphenylethane	LT 3. -01	ug/g	BMP011			
			Dichlorodiphenyltrichloro-ethane	LT 6. -01	ug/g	BMP011			
			Parathion	LT 4. -01	ug/g	BMP011			
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3. -01	ug/g	BMP011			
			Tetrachloroethene	LT 3. -01	ug/g	BM0006			
			Trichloroethene	LT 3. -01	ug/g	BM0006			
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BM0006			
			Zinc	3.7 +01	ug/g	BMX011			
			0024	0-1	Soil	Aldrin	LT 3. -01	ug/g	BM0010
						Arsenic	LT 2.5 +00	ug/g	BMV007
Atrazine	LT 3. -01	ug/g				BM0010			
Cadmium	LT 7.4 -01	ug/g				BMX020			
Hexachlorocyclopentadiene	LT 6. -01	ug/g				BM0010			
Chlordane	LT 2. +00	ug/g				BM0010			
p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g				BM0010			
p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g				BM0010			
p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g				BM0010			
Chromium	7.9 +00	ug/g				BMX020			
Copper	9.6 +00	ug/g				BMX020			
Dibromochloropropane	LT 5.0 -03	ug/g				BNAD07			
Dibromochloropropane	LT 3. -01	ug/g				BM0010			
Dicyclopentadiene	LT 1. +00	ug/g				BM0010			
Vapona	LT 3. +00	ug/g	BM0010						
Diisopropylmethyl Phosphonate			Dithiane	LT 1. +00	ug/g	BM0010			
			Dieldrin	LT 4. -01	ug/g	BM0010			
			Endrin	LT 3. -01	ug/g	BM0010			
			Mercury	LT 5. -01	ug/g	BM0010			
				LT 5.0 -02	ug/g	BMWD18			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Memagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0024	0-1	Soil	Isodrin	LT 3.	-01	ug/g	BM0010
			Malathion	LT 7.	-01	ug/g	BM0010
			1,4-Oxathiane	LT 3.	-01	ug/g	BM0010
			Lead	LT 1.5	+01	ug/g	BMX020
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BM0010
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BM0010
			Parathion	LT 9.	-01	ug/g	BM0010
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6.	-01	ug/g	BM0010
			Zinc	3.8	+01	ug/g	BMX020
			1,1,1-Trichloroethane	LT 4.	-01	ug/g	BMZ003
			1,1,2-Trichloroethane	LT 4.	-01	ug/g	BMZ003
			1,1-Dichloroethane	LT 2.	+00	ug/g	BMZ003
			1,2-Dichloroethane	LT 2.	+00	ug/g	BMZ003
			1,2-Dichloroethane	LT 6.	-01	ug/g	BMZ003
m-Xylene	LT 8.	-01	ug/g	BMZ003			
Aldrin	LT 3.	-01	ug/g	BMZ003			
Arsenic	LT 2.5	+00	ug/g	BMZ003			
Atrazine	LT 3.	-01	ug/g	BMZ003			
Bicycloheptadiene	LT 4.	-01	ug/g	BMZ003			
Benzene	LT 3.	-01	ug/g	BMZ003			
Carbon Tetrachloride	LT 3.	-01	ug/g	BMZ003			
Cadmium	LT 7.4	-01	ug/g	BMZ003			
Methylene Chloride	LT 2.	+00	ug/g	BMZ003			
Chloroform	LT 3.	-01	ug/g	BMZ003			
Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMZ003			
Chlorobenzene	LT 1.	+00	ug/g	BMZ003			
Chlordane	LT 2.	+00	ug/g	BMZ003			
p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMZ003			
p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMZ003			
p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMZ003			
Chromium	1.6	+01	ug/g	BMZ003			
Copper	1.4	+01	ug/g	BMZ003			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0024	4-5	Soil	Dibromochloropropane	LT 3.	-01	ug/g	BMZ002
			Dibromochloropropane	LT 2.	+00	ug/g	BMZ003
			Dibromochloropropane	LT 5.0	-03	ug/g	BNA008
			Dicyclopentadiene	LT 1.	+00	ug/g	BMZ002
			Dicyclopentadiene	LT 7.	-01	ug/g	BMZ003
			Vapona	LT 3.	+00	ug/g	BMZ002
			Diisopropylmethyl Phosphonate	LT 1.	+00	ug/g	BMZ002
			Dithiane	LT 4.	-01	ug/g	BMZ002
			Diieldrin	LT 3.	-01	ug/g	BMZ002
			Dimethylidulfide	LT 2.	+01	ug/g	BMZ003
			Endrin	LT 5.	-01	ug/g	BMZ002
			Ethylbenzene	LT 4.	-01	ug/g	BMZ003
			Mercury	7.0	-02	ug/g	BMW019
			Isodrin	LT 3.	-01	ug/g	BMZ002
			Toluene	LT 3.	-01	ug/g	BMZ003
			Methylisobutyl Ketone	LT 7.	-01	ug/g	BMZ003
			Malathion	LT 7.	-01	ug/g	BMZ002
			1,4-Oxathiane	LT 3.	-01	ug/g	BMZ002
			Lead	2.4	+01	ug/g	BNR005
			Dichlorodiphenylethane	LT 6.	-01	ug/g	BMZ002
0025	0-1	Soil	Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g	BMZ002
			Parathion	LT 9.	-01	ug/g	BMZ002
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	ug/g	BMZ002
			Tetrachloroethene	LT 3.	-01	ug/g	BMZ003
			Trichloroethene	LT 5.	-01	ug/g	BMZ003
			Ortho- & Para Xylene	LT 5.	+00	ug/g	BMZ003
			Zinc	6.1	+01	ug/g	BNR005
			Aldrin	LT 3.	-01	ug/g	BMZ003
			Arsenic	LT 2.5	+00	ug/g	BMZ009
			Atrazine	LT 3.	.01	ug/g	BMZ003
Cadmium	LT 7.4	-01	ug/g	BNR006			
Hexachlorocyclopentadiene	LT 6.	-01	ug/g	BMZ003			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPU) may appear in up to two analytical fractions.

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Rocky Mountain Arsenal Program

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Summary of Analytical Results

Task 7 , Site 3-4 Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0025	0-1	Soil	Chlordane	LT 2.	+00	ug/g	BMV003
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g	BMV003
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	ug/g	BMV003
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	ug/g	BMV003
			Chromium	1.7	+01	ug/g	BNR006
			Copper	1.9	+01	ug/g	BNR006
			Dibromochloropropane	LT 3.	-01	ug/g	BMV003
			Dibromochloropropane	LT 5.0	-03	ug/g	BNA009
			Dicyclopentadiene	LT 1.	+00	ug/g	BMV003
			Vapona	LT 3.	+00	ug/g	BMV003
			4-5	Soil	Diisopropylmethyl Phosphonate	LT 1.	+00
	Dithiane	LT 4.			-01	ug/g	BMV003
	Dieldrin	LT 3.			-01	ug/g	BMV003
	Endrin	LT 5.			-01	ug/g	BMV003
	Mercury	LT 5.0			-02	ug/g	BMV020
	Isodrin	LT 3.			-01	ug/g	BMV003
	Malathion	LT 7.			-01	ug/g	BMV003
	1,4-Oxathiane	LT 3.			-01	ug/g	BMV003
	Lead	1.9			+01	ug/g	BNR006
	Dichlorodiphenylethane	LT 6.			-01	ug/g	BMV003
	Dichlorodiphenyltrichloro-ethane	LT 5.			-01	ug/g	BMV003
	Parathion	LT 9.	-01	ug/g	BMV003		
2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	ug/g	BMV003			
Zinc	1.0	+02	ug/g	BNR006			
0025	4-5	Soil	1,1,1-Trichloroethane	LT 4.	-01	ug/g	BMZ004
			1,1,2-Trichloroethane	LT 4.	-01	ug/g	BMZ004
			1,1-Dichloroethane	LT 2.	+00	ug/g	BMZ004
			1,2-Dichloroethane	LT 2.	+00	ug/g	BMZ004
			1,2-Dichloroethane	LT 6.	-01	ug/g	BMZ004
			m-Xylene	LT 8.	-01	ug/g	BMZ004
			Aldrin	LT 3.	-01	ug/g	BMV004
			Arsenic	LT 2.5	+00	ug/g	BMV010

No results for Dicyclopentadiene (DCPD) in this sample. Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0025	4-5	Soil	Atrazine	LT 3. -01	ug/g	BMZ004
			Bicycloheptadiene	LT 4. -01	ug/g	BMZ004
			Benzene	LT 3. -01	ug/g	BMZ004
			Carbon Tetrachloride	LT 3. -01	ug/g	BMZ004
			Cadmium	LT 7.4 -01	ug/g	BNR007
			Methylene Chloride	LT 2. +00	ug/g	BMZ004
			Chloroform	LT 3. -01	ug/g	BMZ004
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMZ004
			Chlorobenzene	LT 1. +00	ug/g	BMZ004
			Chlordane	LT 2. +00	ug/g	BMZ004
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMZ004
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMZ004
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMZ004
			Chromium	1.6 +01	ug/g	BNR007
			Copper	1.4 +01	ug/g	BNR007
			Dibromochloropropane	LT 3. -01	ug/g	BMZ004
			Dibromochloropropane	LT 2. +00	ug/g	BMZ004
			Dibromochloropropane	LT 5.0 -03	ug/g	BNA010
			Dicyclopentadiene	LT 1. +00	ug/g	BMZ004
			Dicyclopentadiene	LT 7. -01	ug/g	BMZ004
Vapona	LT 3. +00	ug/g	BMZ004			
Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMZ004			
Dithiane	LT 4. -01	ug/g	BMZ004			
Diethrin	LT 3. -01	ug/g	BMZ004			
Dimethyldisulfide	LT 2. +01	ug/g	BMZ004			
Endrin	LT 5. -01	ug/g	BMZ004			
Ethylbenzene	LT 4. -01	ug/g	BMZ004			
Mercury	LT 5.0 -02	ug/g	BN0005			
Isodrin	LT 3. -01	ug/g	BMZ004			
Toluene	LT 3. -01	ug/g	BMZ004			
Methylisobutyl Ketone	LT 7. -01	ug/g	BMZ004			
Malathion	LT 7. -01	ug/g	BMZ004			
1,4-Oxathiane	LT 3. -01	ug/g	BMZ004			
Lead	1.2 +01	ug/g	BNR007			

Note: Results for Dibromochloropropane (DBP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4

Nemadon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0025	4-5	Soil	Dichlorodiphenylethane	LT 6. -01	ug/g	BMZ004
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMZ004
			Parathion	LT 9. -01	ug/g	BMZ004
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BMZ004
			Tetrachloroethene	LT 3. -01	ug/g	BMZ004
			Trichloroethene	LT 5. -01	ug/g	BMZ004
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BMZ004
			Zinc	5.6 +01	ug/g	BNR007
			Aldrin	LT 3. -01	ug/g	BMZ005
			Arsenic	LT 2.5 +00	ug/g	BMZ011
			Atrazine	LT 3. -01	ug/g	BMZ005
			Cadmium	LT 7.4 -01	ug/g	BNR008
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMZ005
			Chlordane	LT 2. +00	ug/g	BMZ005
0026	0-1	Soil	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMZ005
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMZ005
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMZ005
			Chromium	1.0 +01	ug/g	BNR008
			Copper	1.3 +01	ug/g	BNR008
			Dibromochloropropane	LT 3. -01	ug/g	BMZ005
			Dibromochloropropane	LT 5.0 -03	ug/g	BNA011
			Dicyclopentadiene	LT 1. +00	ug/g	BMZ005
			Vapona	LT 3. +00	ug/g	BMZ005
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMZ005
			Dithiane	LT 4. -01	ug/g	BMZ005
			Dieldrin	LT 3. -01	ug/g	BMZ005
			Endrin	LT 5. -01	ug/g	BMZ005
			Mercury	LT 5.0 -02	ug/g	BNQ006
0027	0-1	Soil	Isodrin	LT 3. -01	ug/g	BMZ005
			Malathion	LT 7. -01	ug/g	BMZ005
			1,4-Oxathiane	LT 3. -01	ug/g	BMZ005
			Lead	2.2 +01	ug/g	BNR008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Task 7, Site 3-4 Nemacon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number			
0026	0-1	Soil	Dichlorodiphenylethane	LT 6. -01	ug/g	BMY005			
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g		BMY005		
			Parathion	LT 9. -01	ug/g	BMY005			
			2-Chloro-1(2,4-Dichlorophenyl)-Vinyl diethyl Phosphates	LT 6. -01	ug/g	BMY005			
			Zinc	5.5 +01	ug/g	BNR008			
			0026	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BMZ005
						1,1,2-Trichloroethane	LT 4. -01	ug/g	
						1,1-Dichloroethane	LT 2. +00	ug/g	BMZ005
						1,2-Dichloroethane	LT 2. +00	ug/g	BMZ005
						1,2-Dichloroethane	LT 6. -01	ug/g	BMZ005
m-Xylene	LT 8. -01	ug/g				BMZ005			
Aldrin	LT 3. -01	ug/g				BMY006			
Arsenic	LT 2.5 +00	ug/g				BMV012			
Atrazine	LT 3. -01	ug/g				BMY006			
Bicycloheptadiene	LT 4. -01	ug/g				BMZ005			
			Benzene	LT 3. -01	ug/g	BMZ005			
			Carbon Tetrachloride	LT 3. -01	ug/g	BMZ005			
			Cadmium	LT 7.4 -01	ug/g	BNR009			
			Methylene Chloride	LT 2. +00	ug/g	BMZ005			
			Chloroform	LT 3. -01	ug/g	BMZ005			
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMY006			
			Chlorobenzene	LT 1. +00	ug/g	BMZ005			
			Chlordane	LT 2. +00	ug/g	BMY006			
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMY006			
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMY006			
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMY006			
			Chromium	1.3 +01	ug/g	BNR009			
			Copper	1.3 +01	ug/g	BNR009			
			Dibromochloropropane	LT 3. -01	ug/g	BMY006			
			Dibromochloropropane	LT 2. +00	ug/g	BMZ005			
			Dibromochloropropane	LT 5.0 -03	ug/g	BNAD12			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7, Site 3-4 Nemagen Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0026	4-5	Soil	Dicyclopentadiene	LT 1. +00	ug/g	BMZ006
			Dicyclopentadiene	LT 7. -01	ug/g	BMZ005
			Vapona	LT 3. +00	ug/g	BMZ006
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMZ006
			Dithiane	LT 4. -01	ug/g	BMZ006
			Dieldrin	LT 3. -01	ug/g	BMZ006
			Dimethyldisulfide	LT 2. +01	ug/g	BMZ005
			Endrin	LT 5. -01	ug/g	BMZ006
			Ethylbenzene	LT 4. -01	ug/g	BMZ005
			Mercury	LT 5.0 -02	ug/g	BNQ007
			Isodrin	LT 3. -01	ug/g	BMZ006
			Toluene	LT 3. -01	ug/g	BMZ005
			Methylisobutyl Ketone	LT 7. -01	ug/g	BMZ005
			Malathion	LT 7. -01	ug/g	BMZ006
			1,4-Oxathiane	LT 3. -01	ug/g	BMZ006
			Lead	1.4 +01	ug/g	BNR009
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMZ006
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BMZ006
			Parathion	LT 9. -01	ug/g	BMZ006
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BMZ006
0027	0-1	Soil	Tetrachloroethene	LT 3. -01	ug/g	BMZ005
			Trichloroethene	LT 5. -01	ug/g	BMZ005
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BMZ005
			Zinc	4.9 +01	ug/g	BNR009
			Aldrin	LT 3. -01	ug/g	BMZ007
			Arsenic	LT 2.5 +00	ug/g	BMZ013
			Atrazine	LT 3. -01	ug/g	BMZ007
			Cadmium	LT 7.4 -01	ug/g	BNR010
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMZ007
			Chlordane	LT 2. +00	ug/g	BMZ007
p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMZ007			
p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMZ007			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 7, Site 3-4 Nemagon Spill Area

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0027	0-1	Soil	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMYY007
			Chromium	LT 6.5 +00	ug/g	BNR010
			Copper	LT 9.3 +00	ug/g	BNR010
			Dibromochloropropane	LT 3. -01	ug/g	BMYY007
			Dibromochloropropane	LT 5.0 -03	ug/g	BNAD13
			Dicyclopentadiene	LT 1. +00	ug/g	BMYY007
			Vapona	LT 3. +00	ug/g	BMYY007
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMYY007
			Dithiane	LT 4. -01	ug/g	BMYY007
			Dieldrin	LT 3. -01	ug/g	BMYY007
			Endrin	LT 5. -01	ug/g	BMYY007
			Mercury	LT 5.0 -02	ug/g	BNQ008
			Isodrin	LT 3. -01	ug/g	BMYY007
			Malathion	LT 7. -01	ug/g	BMYY007
			1,4-Oxathiane	LT 3. -01	ug/g	BMYY007
0027	4-5	Soil	Lead	LT 8.4 +00	ug/g	BNR010
			Dichlorodiphenylethane	LT 6. -01	ug/g	BMYY007
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BMYY007
			Parathion	LT 9. -01	ug/g	BMYY007
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BMYY007
			Zinc	2.2 +01	ug/g	BNR010
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BMZ006
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BMZ006
			1,1-Dichloroethane	LT 2. +00	ug/g	BMZ006
			1,2-Dichloroethane	LT 2. +00	ug/g	BMZ006
			1,2-Dichloroethane	LT 6. -01	ug/g	BMZ006
			m-Xylene	LT 8. -01	ug/g	BMZ006
			Aldrin	LT 3. -01	ug/g	BMYY008
			Arsenic	LT 2.5 +00	ug/g	BMV014
			Atrazine	LT 3. -01	ug/g	BMYY008
Bicycloheptadiene	LT 4. -01	ug/g	BMZ006			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0027	4-5	Soil	Benzene	6.	-01	BMZ006
			Carbon Tetrachloride	3.	-01	BMZ006
			Cadmium	LT 7.4	-01	BNR011
			Methylene Chloride	LT 2.	+00	BMZ006
			Chloroform	LT 3.	-01	BMZ006
			Hexachlorocyclopentadiene	LT 6.	-01	BMZ008
			Chlorobenzene	LT 1.	+00	BMZ006
			Chlordane	LT 2.	+00	BMZ008
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	BMZ008
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	BMZ008
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	BMZ008
			Chromium	1.2	+01	BNR011
			Copper	1.2	+01	BNR011
			Dibromochloropropane	LT 3.	-01	BMZ008
			Dibromochloropropane	LT 2.	+00	BMZ006
			Dibromochloropropane	LT 5.0	-03	BNAD14
			Dicyclopentadiene	LT 1.	+00	BMZ008
			Dicyclopentadiene	LT 7.	-01	BMZ006
			Vapona	LT 3.	+00	BMZ008
			Diisopropylmethyl Phosphonate	LT 1.	+00	BMZ008
Dithiane	LT 4.	-01	BMZ008			
Dieldrin	LT 3.	-01	BMZ008			
Dimethyldisulfide	LT 2.	+01	BMZ006			
Endrin	LT 5.	-01	BMZ008			
Ethylbenzene	LT 4.	-01	BMZ006			
Mercury	LT 5.0	-02	BNQ009			
Isodrin	LT 3.	-01	BMZ008			
Toluene	LT 3.	-01	BMZ006			
Methylisobutyl Ketone	LT 7.	-01	BMZ006			
Malathion	LT 7.	-01	BMZ008			
1,4-Oxathiane	LT 3.	-01	BMZ008			
Lead	LT 8.4	+00	BNR011			
Dichlorodiphenylethane	LT 6.	-01	BMZ008			
Dichlorodiphenyltrichloroethane	LT 5.	-01	BMZ008			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 7. Site 3-4

Nemagon Spill Area

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number	
0027	4-5	Soil	Parathion	LT 9.	-01	ug/g	
			2-Chloro-1(2,4-Dichlorophenyl)	LT 6.	-01	ug/g	
			Vinylidethyl Phosphates				
			Tetrachloroethene	4.	-01	ug/g	
			Trichloroethene	LT 5.	-01	ug/g	
Ortho- & Para-Xylene	LT 5.	+00	ug/g				
			Zinc	4.0	+01	ug/g	
						BNR011	

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

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Ebasco Services Incorporated Rocky Mountain Arsenal Program
 Summary of Analytical Results Blanks Associated with Task 7, Site 3-4
 Nemadagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Cadmium	LT 6.6 -01	ug/g	AMG001
Blank	Chromium	9.4 +00	ug/g	AMG001
Blank	Copper	9.1 +00	ug/g	AMG001
Blank	Lead	LT 1.3 +01	ug/g	AMG001
Blank	Zinc	3.6 +01	ug/g	AMG001
Blank	Arsenic	LT 5.0 +00	ug/g	AMM001
Blank	Mercury	LT 5.0 -02	ug/g	AMM001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	AMU001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	AMU001
Blank	Chloroform	LT 3. -01	ug/g	AMU001
Blank	Methylene Chloride	LT 7. -01	ug/g	AMU001
Blank	Chlorobenzene	LT 3. -01	ug/g	AMU001
Blank	Benzene	LT 3. -01	ug/g	AMU001
Blank	Dibromochloropropane	LT 4. -01	ug/g	AMU001
Blank	Dicyclopentadiene	LT 3. -01	ug/g	AMU001
Blank	Dimethylsulfide	LT 8. -01	ug/g	AMU001
Blank	Ethylbenzene	LT 3. -01	ug/g	AMU001
Blank	Toluene	LT 3. -01	ug/g	AMU001
Blank	Methylisobutyl Ketone	LT 3. -01	ug/g	AMU001
Blank	Tetrachloroethene	LT 3. -01	ug/g	AMU001
Blank	Trichloroethene	LT 3. -01	ug/g	AMU001
Blank	Trans-1,2-Dichloroethene	LT 3. -01	ug/g	AMU001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	AMU001
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	AMU001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	AMU001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	AMU001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	AMU001
Blank	m-Xylene	LT 7. -01	ug/g	AMU001
Blank	Aldrin	LT 3. -01	ug/g	AMU001
Blank	Atrazine	LT 3. -01	ug/g	AMU001
Blank	Chlordane	LT 6. -01	ug/g	AMV001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	AMV001
Blank	p-Chlorophenylmethyl Sulfide*	LT 4. +00	ug/g	AMV001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	AMV001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	AMV001
Blank	Dibromochloropropane	LT 3. -01	ug/g	AMV001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	AMV001
Blank	Vapona	LT 3. -01	ug/g	AMV001
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	AMV001
Blank	Dithiane	LT 7. +00	ug/g	AMV001
Blank	Dieldrin	LT 3. -01	ug/g	AMV001
Blank	Endrin	LT 3. -01	ug/g	AMV001
Blank	Isodrin	LT 3. -01	ug/g	AMV001
Blank	Malathion	LT 3. -01	ug/g	AMV001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	AMV001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	AMV001
Blank	Dichlorodiphenyltrichloro-ethane	LT 6. -01	ug/g	AMV001
Blank	Parathion	LT 4. -01	ug/g	AMV001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3. -01	ug/g	AMV001
Blank	Dibromochloropropane	LT 1.4 -02	ug/g	AMX001
Blank	Dibromochloropropane	LT 1.4 -02	ug/g	ANE001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	ANG001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	ANG001
Blank	Chloroform	LT 3. -01	ug/g	ANG001
Blank	Methylene Chloride	LT 7. -01	ug/g	ANG001
Blank	Chlorobenzene	LT 3. -01	ug/g	ANG001
Blank	Benzene	LT 3. -01	ug/g	ANG001
Blank	Dibromochloropropane	LT 4. -01	ug/g	ANG001
Blank	Dicycloheptadiene	LT 3. -01	ug/g	ANG001
Blank	Dimethyldisulfide	LT 8. -01	ug/g	ANG001
Blank	Ethylbenzene	LT 3. -01	ug/g	ANG001
Blank	Toluene	LT 3. -01	ug/g	ANG001
Blank	Methylisobutyl ketone	LT 3. -01	ug/g	ANG001
Blank	tetrachloroethene	LT 3. -01	ug/g	ANG001
Blank	Trichloroethene	LT 3. -01	ug/g	ANG001

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Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Summary of Analytical Results

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Trans-1,2-Dichloroethene	LT 3. -01	ug/g	ANG001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	ANG001
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	ANG001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	ANG001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	ANG001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	ANG001
Blank	m-Xylene	LT 7. -01	ug/g	ANG001
Blank	Aldrin	LT 3. -01	ug/g	ANH001
Blank	Atrazine	LT 3. -01	ug/g	ANH001
Blank	Chlordane	LT 6. -01	ug/g	ANH001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	ANH001
Blank	p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	ANH001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	ANH001
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	ANH001
Blank	Dibromochloropropane	LT 3. -01	ug/g	ANH001
Blank	Dicyclopentadiene	LT 4. -01	ug/g	ANH001
Blank	Vapona	LT 3. -01	ug/g	ANH001
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	ANH001
Blank	Dithiane	LT 7. +00	ug/g	ANH001
Blank	Dieldrin	LT 3. -01	ug/g	ANH001
Blank	Endrin	LT 3. -01	ug/g	ANH001
Blank	Isodrin	LT 3. -01	ug/g	ANH001
Blank	Malathion	LT 3. -01	ug/g	ANH001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	ANH001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	ANH001
Blank	Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	ANH001
Blank	Parathion	LT 4. -01	ug/g	ANH001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates.	LT 3. -01	ug/g	ANH001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	ANW001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	ANW001
Blank	Chloroform	LT 3. -01	ug/g	ANW001
Blank	Methylene Chloride	LT 7. -01	ug/g	ANW001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Chlorobenzene	LT 3. -01	ug/g	ANW001
Blank	Benzene	LT 3. -01	ug/g	ANW001
Blank	Dibromochloropropane	LT 4. -01	ug/g	ANW001
Blank	Dicyclopentadiene	LT 3. -01	ug/g	ANW001
Blank	Dimethyldisulfide	LT 8. -01	ug/g	ANW001
Blank	Ethylbenzene	LT 3. -01	ug/g	ANW001
Blank	Toluene	LT 3. -01	ug/g	ANW001
Blank	Methylisobutyl Ketone	LT 3. -01	ug/g	ANW001
Blank	Tetrachloroethene	LT 3. -01	ug/g	ANW001
Blank	Trichloroethene	LT 3. -01	ug/g	ANW001
Blank	Trans-1,2-Dichloroethene	LT 3. -01	ug/g	ANW001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	ANW001
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	ANW001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	ANW001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	ANW001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	ANW001
Blank	m-Xylene	LT 7. -01	ug/g	ANW001
Blank	Aldrin	LT 3. -01	ug/g	ANX001
Blank	Atrazine	LT 3. -01	ug/g	ANX001
Blank	Chlordane	LT 6. -01	ug/g	ANX001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	ANX001
Blank	p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	ANX001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	ANX001
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	ANX001
Blank	Dibromochloropropane	LT 3. -01	ug/g	ANX001
Blank	Dicyclopentadiene	LT 4. -01	ug/g	ANX001
Blank	Vaporol	LT 3. -01	ug/g	ANX001
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	ANX001
Blank	Dithiane	LT 7. +00	ug/g	ANX001
Blank	Dieldrin	LT 3. -01	ug/g	ANX001
Blank	Endrin	LT 3. -01	ug/g	ANX001
Blank	Isodrin	LT 3. -01	ug/g	ANX001
Blank	Malathion	LT 3. -01	ug/g	ANX001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Newagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	1,4-Oxathiane	LT 6. +00	ug/g	ANX001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	ANX001
Blank	Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	ANX001
Blank	Parathion	LT 4. -01	ug/g	ANX001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g	ANX001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	ANY001
Blank	Mercury	LT 5.0 -02	ug/g	A0A001
Blank	Cadmium	LT 6.6 -01	ug/g	A0B001
Blank	Chromium	7.8 +00	ug/g	A0B001
Blank	Copper	8.5 +00	ug/g	A0B001
Blank	Lead	LT 1.3 +01	ug/g	A0B001
Blank	Zinc	3.1 +01	ug/g	A0B001
Blank	Arsenic	LT 5.0 +00	ug/g	A0C001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	A0G001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	A0G001
Blank	Chloroform	LT 3. -01	ug/g	A0G001
Blank	Methylene Chloride	LT 7. -01	ug/g	A0G001
Blank	Chlorobenzene	LT 3. -01	ug/g	A0G001
Blank	Benzene	LT 3. -01	ug/g	A0G001
Blank	Dibromochloropropane	LT 4. -01	ug/g	A0G001
Blank	Dicyclopentadiene	LT 3. -01	ug/g	A0G001
Blank	Dimethyldisulfide	LT 8. -01	ug/g	A0G001
Blank	Ethylbenzene	LT 3. -01	ug/g	A0G001
Blank	Toluene	LT 3. -01	ug/g	A0G001
Blank	Methylisobutyl Ketone	LT 3. -01	ug/g	A0G001
Blank	Tetrachloroethene	LT 3. -01	ug/g	A0G001
Blank	Trichloroethene	LT 3. -01	ug/g	A0G001
Blank	Trans-1,2-Dichloroethene	LT 3. -01	ug/g	A0G001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	A0G001
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	A0G001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	A0G001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	A0G001

Note: Blanks are included to analytical lots by the first three characters in the Sample Number.

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Summary of Analytical Results Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	A03001
Blank	m Xylene	LT 7. -01	ug/g	A06001
Blank	Aldrin	LT 3. -01	ug/g	A0H001
Blank	Atrazine	LT 3. -01	ug/g	A0H001
Blank	Chlordane	LT 6. -01	ug/g	A0H001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	A0H001
Blank	p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	A0H001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	A0H001
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	A0H001
Blank	Dibromochloropropane	LT 3. -01	ug/g	A0H001
Blank	Dicyclopentadiene	LT 4. -01	ug/g	A0H001
Blank	Vapona	LT 3. -01	ug/g	A0H001
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	A0H001
Blank	Dithiane	LT 7. +00	ug/g	A0H001
Blank	Dieldrin	LT 3. -01	ug/g	A0H001
Blank	Endrin	LT 3. -01	ug/g	A0H001
Blank	Isodrin	LT 3. -01	ug/g	A0H001
Blank	Malathion	LT 3. -01	ug/g	A0H001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	A0H001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	A0H001
Blank	Dichlorodiphenyltrichloro-ethane	LT 6. -01	ug/g	A0H001
Blank	Parathion	LT 4. -01	ug/g	A0H001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3. -01	ug/g	A0H001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	A0K001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	A0K001
Blank	Chloroform	LT 3. -01	ug/g	A0K001
Blank	Methylene Chloride	LT 7. -01	ug/g	A0K001
Blank	Chlorobenzene	LT 3. -01	ug/g	A0K001
Blank	Benzene	LT 3. -01	ug/g	A0K001
Blank	Dibromochloropropane	LT 4. -01	ug/g	A0K001
Blank	Dicyclopentadiene	LT 3. -01	ug/g	A0K001
Blank	Dimethyldisulfide	LT 8. -01	ug/g	A0K001

Note: Blanks are included for analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemegon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Ethylbenzene	LT 3. -01	ug/g	AOK001
Blank	Toluene	LT 3. -01	ug/g	AOK001
Blank	Methylisobutyl Ketone	LT 3. -01	ug/g	AOK001
Blank	Tetrachloroethene	LT 3. -01	ug/g	AOK001
Blank	Trichloroethene	LT 3. -01	ug/g	AOK001
Blank	Trans-1,2-Dichloroethene	LT 3. -01	ug/g	AOK001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	AOK001
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	AOK001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	AOK001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	AOK001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	AOK001
Blank	m-Xylene	LT 7. -01	ug/g	AOK001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	AOK001
Blank	Aldrin	LT 3. -01	ug/g	AOK001
Blank	Atrazine	LT 3. -01	ug/g	AOK001
Blank	Chlordane	LT 6. -01	ug/g	AOK001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	AOK001
Blank	p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	AOK001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	AOK001
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	AOK001
Blank	Dibromochloropropane	LT 3. -01	ug/g	AOK001
Blank	Dicyclopentadiene	LT 4. -01	ug/g	AOK001
Blank	Vapona	LT 3. -01	ug/g	AOK001
Blank	Diisopropylmethyl Phosphoriate	LT 3. -01	ug/g	AOK001
Blank	Dithiane	LT 7. +00	ug/g	AOK001
Blank	Dieldrin	LT 3. -01	ug/g	AOK001
Blank	Endrin	LT 3. -01	ug/g	AOK001
Blank	Isodrin	LT 3. -01	ug/g	AOK001
Blank	Malathion	LT 3. -01	ug/g	AOK001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	AOK001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	AOK001
Blank	Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	AOK001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Parathion	LT 4.	ug/g	AOR001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3.	ug/g	AON001
Blank	Bicycloheptadiene	LT 3.	ug/g	AOR001
Blank	Carbon Tetrachloride	LT 3.	ug/g	AOR001
Blank	Chloroform	LT 3.	ug/g	AOR001
Blank	Methylene Chloride	LT 7.	ug/g	AOR001
Blank	Chlorobenzene	LT 3.	ug/g	AOR001
Blank	Benzene	LT 3.	ug/g	AOR001
Blank	Dibromochloropropane	LT 4.	ug/g	AOR001
Blank	Dicyclopentadiene	LT 3.	ug/g	AOR001
Blank	Dimethyldisulfide	LT 8.	ug/g	AOR001
Blank	Ethylbenzene	LT 3.	ug/g	AOR001
Blank	Toluene	LT 3.	ug/g	AOR001
Blank	Methylisobutyl Ketone	LT 3.	ug/g	AOR001
Blank	Tetrachloroethene	LT 3.	ug/g	AOR001
Blank	Trichloroethene	LT 3.	ug/g	AOR001
Blank	Trans-1,2-Dichloroethene	LT 3.	ug/g	AOR001
Blank	Ortho- & Para-Xylene	LT 3.	ug/g	AOR001
Blank	1,1-Dichloroethane	LT 9.	ug/g	AOR001
Blank	1,1,1-Trichloroethane	LT 3.	ug/g	AOR001
Blank	1,1,2-Trichloroethane	LT 3.	ug/g	AOR001
Blank	1,2-Dichloroethane	LT 3.	ug/g	AOR001
Blank	m-Xylene	LT 7.	ug/g	AOR001
Blank	Aldrin	LT 3.	ug/g	AOS001
Blank	Atrazine	LT 3.	ug/g	AOS001
Blank	Chlordane	LT 6.	ug/g	AOS001
Blank	Hexachlorocyclopentadiene	LT 3.	ug/g	AOS001
Blank	p-Chlorophenylmethyl Sulfide	LT 4.	ug/g	AOS001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7.	ug/g	AOS001
Blank	p-Chlorophenylmethyl Sulfone	LT 6.	ug/g	AOS001
Blank	Dibromochloropropane	LT 3.	ug/g	AOS001
Blank	Dicyclopentadiene	LT 4.	ug/g	AOS001
Blank	Vapona	LT 3.	ug/g	AOS001

Note: Blanks are matched to analytical jobs by the first three characters in the Sample Number.

Ebasco Services Incorporated
 Summary of Analytical Results

Rocky Mountain Arsenal Program
 Blanks Associated with Task 7, Site 3-4
 Nemagon Spill Area

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Type	Analytical Parameters	Results	Units	Sample Number
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	AOS001
Blank	Dithiane	LT 7. +00	ug/g	AOS001
Blank	Dieldrin	LT 3. -01	ug/g	AOS001
Blank	Endrin	LT 3. -01	ug/g	AOS001
Blank	Isodrin	LT 3. -01	ug/g	AOS001
Blank	Malathion	LT 3. -01	ug/g	AOS001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	AOS001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	AOS001
Blank	Dichlorodiphenyltrichloro-ethane	LT 6. -01	ug/g	AOS001
Blank	Parathion	LT 4. -01	ug/g	AOS001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3. -01	ug/g	AOS001
Blank	Cadmium	LT 7.4 -01	ug/g	APA001
Blank	Chromium	1.2 +01	ug/g	APA001
Blank	Copper	5.0 +00	ug/g	APA001
Blank	Lead	LT 8.4 +00	ug/g	APA001
Blank	Zinc	3.2 +01	ug/g	APA001
Blank	Aldrin	LT 3. -01	ug/g	APB001
Blank	Atrazine	LT 3. -01	ug/g	APB001
Blank	Chlordane	LT 6. -01	ug/g	APB001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	APB001
Blank	p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	APB001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	APB001
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	APB001
Blank	Dibromochloropropane	LT 3. -01	ug/g	APB001
Blank	Dicyclopentadiene	LT 4. -01	ug/g	APB001
Blank	Vapona	LT 3. -01	ug/g	APB001
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	APB001
Blank	Dithiane	LT 7. +00	ug/g	APB001
Blank	Dieldrin	LT 3. -01	ug/g	APB001
Blank	Endrin	LT 3. -01	ug/g	APB001
Blank	Isodrin	LT 3. -01	ug/g	APB001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Malathion	LT 3. -01	ug/g	APB001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	APB001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	APB001
Blank	Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	APB001
Blank	Parathion	LT 4. -01	ug/g	APB001
Blank	2-Chloro-1(2,4-Dichlorophenyl)vinylethyl Phosphates	LT 3. -01	ug/g	APB001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	APF001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	APF001
Blank	Chloroform	LT 3. -01	ug/g	APF001
Blank	Methylene Chloride	LT 7. -01	ug/g	APF001
Blank	Chlorobenzene	LT 3. -01	ug/g	APF001
Blank	Benzene	LT 3. -01	ug/g	APF001
Blank	Dibromochloropropane	LT 4. -01	ug/g	APF001
Blank	Dicyclopentadiene	LT 3. -01	ug/g	APF001
Blank	Dimethyldisulfide	LT 8. -01	ug/g	APF001
Blank	Ethylbenzene	LT 3. -01	ug/g	APF001
Blank	Toluene	LT 3. -01	ug/g	APF001
Blank	Methylisobutyl Ketone	LT 3. -01	ug/g	APF001
Blank	Tetrachloroethene	LT 3. -01	ug/g	APF001
Blank	Trichloroethene	LT 3. -01	ug/g	APF001
Blank	Trans-1,2-Dichloroethene	LT 3. -01	ug/g	APF001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	APF001
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	APF001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	APF001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	APF001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	APF001
Blank	m-Xylene	LT 7. -01	ug/g	APF001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	API001
Blank	Mercury	LT 5.0 -02	ug/g	APN001
Blank	Mercury	LT 5.0 -02	ug/g	BKK001
Blank	Aldrin	LT 3. -01	ug/g	BLL001
Blank	Atrazine	LT 3. -01	ug/g	BLL001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Chlordane	LT 6. -01	ug/g	BLL001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	BLL001
Blank	p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BLL001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BLL001
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BLL001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BLL001
Blank	Dicyclopentadiene	LT 4. -01	ug/g	BLL001
Blank	Vapona	LT 3. -01	ug/g	BLL001
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BLL001
Blank	Dithiane	LT 7. +00	ug/g	BLL001
Blank	Dieldrin	LT 3. -01	ug/g	BLL001
Blank	Endrin	LT 3. -01	ug/g	BLL001
Blank	Isodrin	LT 3. -01	ug/g	BLL001
Blank	Malathion	LT 3. -01	ug/g	BLL001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	BLL001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	BLL001
Blank	Dichlorodiphenyltrichloro-ethane	LT 6. -01	ug/g	BLL001
Blank	Parathion	LT 4. -01	ug/g	BLL001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 3. -01	ug/g	BLL001
Blank	Aldrin	LT 3. -01	ug/g	BLU001
Blank	Atrazine	LT 3. -01	ug/g	BLU001
Blank	Chlordane	LT 2. +00	ug/g	BLU001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BLU001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BLU001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BLU001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BLU001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BLU001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BLU001
Blank	Vapona	LT 3. +00	ug/g	BLU001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BLU001
Blank	Dithiane	LT 4. -01	ug/g	BLU001
Blank	Dieldrin	LT 3. -01	ug/g	BLU001

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Endrin	LT 5. -01	ug/g	BLU001
Blank	Isodrin	LT 3. -01	ug/g	BLU001
Blank	Malathion	LT 7. -01	ug/g	BLU001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BLU001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BLU001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BLU001
Blank	Parathion	LT 9. -01	ug/g	BLU001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BLU001
Blank	Diethyl Phthalate - D4	8.1 +00	ug/g	BLU001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BLV001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BLV001
Blank	Chlorobenzene	LT 1. +00	ug/g	BLV001
Blank	Benzene	LT 3. -01	ug/g	BLV001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BLV001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BLV001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BLV001
Blank	Ethylbenzene	LT 4. -01	ug/g	BLV001
Blank	Toluene	LT 3. -01	ug/g	BLV001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BLV001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BLV001
Blank	Trichloroethene	LT 5. -01	ug/g	BLV001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BLV001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BLV001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BLV001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BLV001
Blank	m-Xylene	LT 8. -01	ug/g	BLV001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BLW001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BLZ001
Blank	Carbon tetrachloride	LT 3. -01	ug/g	BLZ001
Blank	Chloroform	LT 3. -01	ug/g	BLZ001
Blank	Methylene Chloride	LT 2. +00	ug/g	BLZ001

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Chlorobenzene	LT 1. +00	ug/g	BLZ001
Blank	Benzene	LT 3. -01	ug/g	BLZ001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BLZ001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BLZ001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BLZ001
Blank	Ethylbenzene	LT 4. -01	ug/g	BLZ001
Blank	Toluene	LT 3. -01	ug/g	BLZ001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BLZ001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BLZ001
Blank	Trichloroethene	LT 5. -01	ug/g	BLZ001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BLZ001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BLZ001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BLZ001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BLZ001
Blank	1,2-Dichloroethane	LT 2. +00	ug/g	BLZ001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BLZ001
Blank	m-Xylene	LT 8. -01	ug/g	BLZ001
Blank	Aldrin	LT 3. -01	ug/g	BMA001
Blank	Atrazine	LT 3. -01	ug/g	BMA001
Blank	Chlordane	LT 2. +00	ug/g	BMA001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMA001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMA001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMA001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMA001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BMA001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BMA001
Blank	Vapona	LT 3. +00	ug/g	BMA001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMA001
Blank	Dithiane	LT 4. -01	ug/g	BMA001
Blank	Dieldrin	LT 3. -01	ug/g	BMA001
Blank	Endrin	LT 5. -01	ug/g	BMA001
Blank	Isodrin	LT 3. -01	ug/g	BMA001
Blank	Malathion	LT 7. -01	ug/g	BMA001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BMA001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BMA001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMA001
Blank	Parathion	LT 9. -01	ug/g	BMA001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BMA001
Blank	Diethyl Phthalate - D4	3.0 -01	ug/g	BMA006
Blank	Di-N-Octyl Phthalate - D4	LT 6.0 -01	ug/g	BMA006
Blank	1,3-Dichlorobenzene - D4	LT 4.0 -01	ug/g	BMA006
Blank	2-Chlorophenol - D4	LT 1.0 +00	ug/g	BMA006
Blank	Aldrin	LT 3. -01	ug/g	BMB001
Blank	Atrazine	LT 3. -01	ug/g	BMB001
Blank	Chlordane	LT 2. +00	ug/g	BMB001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMB001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMB001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMB001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMB001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BMB001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BMB001
Blank	Vapona	LT 3. +00	ug/g	BMB001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMB001
Blank	Dithiane	LT 4. -01	ug/g	BMB001
Blank	Dieldrin	LT 3. -01	ug/g	BMB001
Blank	Endrin	LT 5. -01	ug/g	BMB001
Blank	Isodrin	LT 3. -01	ug/g	BMB001
Blank	Malathion	LT 7. -01	ug/g	BMB001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BMB001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BMB001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMB001
Blank	Parathion	LT 9. -01	ug/g	BMB001
Blank	2-Chloro 1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BMB001
Blank	Arsenic	LT 2-5 +00	ug/g	BMC001

11/07/86

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Summary of Analytical Results
Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Cadmium	LT 7.4 -01	ug/g	BMD001
Blank	Chromium	1.4 +01	ug/g	BMD001
Blank	Copper	1.1 +01	ug/g	BMD001
Blank	Lead	1.1 +01	ug/g	BMD001
Blank	Zinc	3.9 +01	ug/g	BMD001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	BME001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BME001
Blank	Chloroform	LT 3. -01	ug/g	BME001
Blank	Methylene Chloride	LT 7. -01	ug/g	BME001
Blank	Chlorobenzene	LT 3. -01	ug/g	BME001
Blank	Benzene	LT 3. -01	ug/g	BME001
Blank	Dibromochloropropane	LT 4. -01	ug/g	BME001
Blank	Dicyclopentadiene	LT 3. -01	ug/g	BME001
Blank	Dimethyldisulfide	LT 8. -01	ug/g	BME001
Blank	Ethylbenzene	LT 3. -01	ug/g	BME001
Blank	Toluene	LT 3. -01	ug/g	BME001
Blank	Methylisobutyl Ketone	LT 3. -01	ug/g	BME001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BME001
Blank	Trichloroethene	LT 3. -01	ug/g	BME001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	BME001
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	BME001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	BME001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	BME001
Blank	1,2-Dichloroethene	LT 3. -01	ug/g	BME001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	BME001
Blank	m-Xylene	LT 7. -01	ug/g	BME001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BMF001
Blank	Aldrin	LT 3. -01	ug/g	BMG001
Blank	Atrazine	LT 3. -01	ug/g	BMG001
Blank	Chlordane	LT 2. +00	ug/g	BMG001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMGU01
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMG001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMG001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMG001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BMG001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BMG001
Blank	Vapona	LT 3. +00	ug/g	BMG001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMG001
Blank	Dithiane	LT 4. -01	ug/g	BMG001
Blank	Dieldrin	LT 3. -01	ug/g	BMG001
Blank	Endrin	LT 5. -01	ug/g	BMG001
Blank	Isodrin	LT 3. -01	ug/g	BMG001
Blank	Malathion	LT 7. -01	ug/g	BMG001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BMG001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BMG001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMG001
Blank	Parathion	LT 9. -01	ug/g	BMG001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BMG001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BMH001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BMH001
Blank	Chloroform	LT 3. -01	ug/g	BMH001
Blank	Methylene Chloride	LT 2. +00	ug/g	BMH001
Blank	Chlorobenzene	LT 1. +00	ug/g	BMH001
Blank	Benzene	LT 3. -01	ug/g	BMH001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BMH001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BMH001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BMH001
Blank	Ethylbenzene	LT 4. -01	ug/g	BMH001
Blank	Toluene	LT 3. -01	ug/g	BMH001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BMH001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BMH001
Blank	Trichloroethene	LT 5. -01	ug/g	BMH001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BMH001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BMH001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BMH001

Summary of Analytical Results

Blanks Associated with task 7, Site 3-4
Newagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BMH001
Blank	1,2-Dichloroethene	LT 2. +00	ug/g	BMH001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BMH001
Blank	m-Xylene	LT 8. -01	ug/g	BMH001
Blank	Aldrin	LT 3. -01	ug/g	BMI001
Blank	Atrazine	LT 3. -01	ug/g	BMI001
Blank	Chlordane	LT 2. +00	ug/g	BMI001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMI001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMI001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMI001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMI001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BMI001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BMI001
Blank	Vapona	LT 3. +00	ug/g	BMI001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMI001
Blank	Dithiane	LT 4. -01	ug/g	BMI001
Blank	Dieldrin	LT 3. -01	ug/g	BMI001
Blank	Endrin	LT 5. -01	ug/g	BMI001
Blank	Isodrin	LT 3. -01	ug/g	BMI001
Blank	Malathion	LT 7. -01	ug/g	BMI001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BMI001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BMI001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BMI001
Blank	Parathion	LT 9. -01	ug/g	BMI001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BMI001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BMJ001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BMJ001
Blank	Chloroform	LT 3. -01	ug/g	BMJ001
Blank	Methylene Chloride	LT 2. +00	ug/g	BMJ001
Blank	Chlorobenzene	LT 1. +00	ug/g	BMJ001
Blank	Benzene	LT 3. -01	ug/g	BMJ001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Dibromochloropropane	LT 2. +00	ug/g	BMJ001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BMJ001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BMJ001
Blank	Ethylbenzene	LT 4. -01	ug/g	BMJ001
Blank	Toluene	LT 3. -01	ug/g	BMJ001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BMJ001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BMJ001
Blank	Trichloroethene	LT 5. -01	ug/g	BMJ001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BMJ001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BMJ001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BMJ001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BMJ001
Blank	1,2-Dichloroethene	LT 2. +00	ug/g	BMJ001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BMJ001
Blank	m-Xylene	LT 8. -01	ug/g	BMJ001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BMK001
Blank	Mercury	LT 5.0 -02	ug/g	BML001
Blank	Mercury	LT 5.0 -02	ug/g	BMN001
Blank	Arsenic	LT 2.5 +00	ug/g	BMN001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	BMN001
Blank	Carbon tetrachloride	LT 3. -01	ug/g	BMN001
Blank	Chloroform	LT 3. -01	ug/g	BMN001
Blank	Methylene Chloride	LT 7. -01	ug/g	BMN001
Blank	Chlorobenzene	LT 3. -01	ug/g	BMN001
Blank	Benzene	LT 3. -01	ug/g	BMN001
Blank	Dibromochloropropane	LT 4. -01	ug/g	BMN001
Blank	Dicyclopentadiene	LT 3. -01	ug/g	BMN001
Blank	Dimethyldisulfide	LT 8. -01	ug/g	BMN001
Blank	Ethylbenzene	LT 3. -01	ug/g	BMN001
Blank	Toluene	LT 3. -01	ug/g	BMN001
Blank	Methylisobutyl Ketone	LT 3. -01	ug/g	BMN001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BMN001
Blank	Trichloroethene	LT 3. -01	ug/g	BMN001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	BMN001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nonagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	BM0001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	BM0001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	BM0001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	BM0001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	BM0001
Blank	m-Xylene	LT 7. -01	ug/g	BM0001
Blank	Aldrin	LT 3. -01	ug/g	BMP001
Blank	Atrazine	LT 3. -01	ug/g	BMP001
Blank	Chlordane	LT 6. -01	ug/g	BMP001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	BMP001
Blank	p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BMP001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BMP001
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BMP001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BMP001
Blank	Dicyclopentadiene	LT 4. -01	ug/g	BMP001
Blank	Vapona	LT 3. -01	ug/g	BMP001
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BMP001
Blank	Dithiane	LT 7. +00	ug/g	BMP001
Blank	Dieldrin	LT 3. -01	ug/g	BMP001
Blank	Endrin	LT 3. -01	ug/g	BMP001
Blank	Isodrin	LT 3. -01	ug/g	BMP001
Blank	Malathion	LT 3. -01	ug/g	BMP001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	BMP001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	BMP001
Blank	Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BMP001
Blank	Parathion	LT 4. -01	ug/g	BMP001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	BMP001
Blank	Aldrin	LT 3. -01	ug/g	BM0001
Blank	Atrazine	LT 3. -01	ug/g	BM0001
Blank	Chlordane	LT 2. +00	ug/g	BM0001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BM0001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Summary of Analytical Results
 Blanks Associated with Task 7, Site 3-4
 Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BM0001
Blank	p-Chlorophenylmethyl Sulfide	LT 3. -01	ug/g	BM0001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BM0001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BM0001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BM0001
Blank	Vapona	LT 3. +00	ug/g	BM0001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BM0001
Blank	Dithiane	LT 4. -01	ug/g	BM0001
Blank	Dieldrin	LT 3. -01	ug/g	BM0001
Blank	Endrin	LT 5. -01	ug/g	BM0001
Blank	Isodrin	LT 3. -01	ug/g	BM0001
Blank	Malathion	LT 7. -01	ug/g	BM0001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BM0001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BM0001
Blank	Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BM0001
Blank	Parathion	LT 9. -01	ug/g	BM0001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BM0001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BMR001
Blank	Arsenic	LT 5.0 +00	ug/g	BMS001
Blank	Cadmium	LT 6.6 -01	ug/g	BMT001
Blank	Chromium	LT 5.2 +00	ug/g	BMT001
Blank	Copper	LT 4.9 +00	ug/g	BMT001
Blank	Lead	LT 1.3 +01	ug/g	BMT001
Blank	Zinc	LT 9.5 +00	ug/g	BMT001
Blank	Cadmium	LT 7.4 -01	ug/g	BMU001
Blank	Chromium	1.5 +01	ug/g	BMU001
Blank	Copper	1.1 +01	ug/g	BMU001
Blank	Lead	1.3 +01	ug/g	BMU001
Blank	Zinc	4.1 +01	ug/g	BMU001
Blank	Arsenic	2.9 +00	ug/g	BMV001
Blank	Mercury	LT 5.0 -02	ug/g	BMW001
Blank	Cadmium	LT 7.4 -01	ug/g	BMX001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

11/07/86

ibasco Services Incorporated

Rocky Mountain Arsenal Program

Summary of Analytical Results

Blanks Associated with Task 7, Site 3-4
Nemagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Chromium	1.3 +01	ug/g	BMX001
Blank	Copper	1.2 +01	ug/g	BMX001
Blank	Lead	LT 8.4 +00	ug/g	BMX001
Blank	Zinc	3.9 +01	ug/g	BMX001
Blank	Aldrin	LT 3. -01	ug/g	BMX001
Blank	Atrazine	LT 3. -01	ug/g	BMX001
Blank	Chlordane	LT 2. +00	ug/g	BMX001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BMX001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BMX001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BMX001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BMX001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BMX001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BMX001
Blank	Vapona	LT 3. +00	ug/g	BMX001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BMX001
Blank	Dithiane	LT 4. -01	ug/g	BMX001
Blank	Dieldrin	LT 3. -01	ug/g	BMX001
Blank	Endrin	LT 5. -01	ug/g	BMX001
Blank	Isodrin	LT 3. -01	ug/g	BMX001
Blank	Malathion	LT 7. -01	ug/g	BMX001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BMX001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BMX001
Blank	Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BMX001
Blank	Parathion	LT 9. -01	ug/g	BMX001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BMX001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BMX001
Blank	Carbon tetrachloride	LT 3. -01	ug/g	BMX001
Blank	Chloroform	LT 3. -01	ug/g	BMX001
Blank	Methylene Chloride	LT 2. +00	ug/g	BMX001
Blank	Chlorobenzene	LT 1. +00	ug/g	BMX001
Blank	Benzene	LT 3. -01	ug/g	BMX001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BMX001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

11/07/86

Ebasco Services Incorporated Rocky Mountain Arsenal Program
 Summary of Analytical Results Blanks Associated with Task 7, Site 3-4
 Menagon Spill Area

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BMZ001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BMZ001
Blank	Ethylbenzene	LT 4. -01	ug/g	BMZ001
Blank	Toluene	LT 3. -01	ug/g	BMZ001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BMZ001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BMZ001
Blank	Trichloroethene	LT 5. -01	ug/g	BMZ001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BMZ001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BMZ001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BMZ001
Blank	1,1,1,2-Trichloroethane	LT 4. -01	ug/g	BMZ001
Blank	1,2-Dichloroethene	LT 2. +00	ug/g	BMZ001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BMZ001
Blank	m-Xylene	LT 8. -01	ug/g	BMZ001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BNA001
Blank	Mercury	LT 5.0 -02	ug/g	BND001
Blank	Cadmium	LT 7.4 -01	ug/g	BNR001
Blank	Chromium	1.4 +01	ug/g	BNR001
Blank	Copper	1.1 +01	ug/g	BNR001
Blank	Lead	1.2 +01	ug/g	BNR001
Blank	Zinc	4.5 +01	ug/g	BNR001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Appendix 3-4 -C

Comments and Responses

STATE OF COLORADO

COLORADO DEPARTMENT OF HEALTH

4210 East 11th Avenue
Denver, Colorado 80220
Phone (303) 320-8333



Roy Romer
Governor

Thomas M. Vernon, M.D.
Executive Director

March 7, 1988

Mr. Donald Campbell
Office of the Program Manager
RMA Contamination Cleanup
AMXRM-EE, Building R4460
Department of the Army
Aberdeen Proving Grounds, Maryland 21010-5401

Re: Task 7, Site 3-4 Nemagon Spill Area

Dear Mr. Campbell:

While the State believes the Army has made a substantial effort with respect to the Phase I program, attached are the State's comments concerning the Draft Final Contamination Report, Site 3-4, Nemagon Spill Area. The Phase II plan should be modified to better define the nature and extent of soils contamination.

If you have any questions, please contact Mr. Jeff Edson with this division.

Sincerely,

David C. Shelton, Director
Hazardous Materials and
Waste Management Division

DCS:nr

cc: Howard Kenison, Colorado Attorney General's Office
Robert Duprey, U.S. Environmental Protection Agency
Connally Mears, U.S. Environmental Protection Agency
Chris Rahn, Shell Oil Company
Edward McGrath, Esq., Holme, Roberts and Owen
David Anderson, Department of Justice
Michael Gaydos, U.S. Environmental Protection Agency

8800540-1/3

RESPONSE TO COMMENTS OF
THE COLORADO DEPARTMENT OF
HEALTH ON DRAFT FINAL CONTAMINATION
ASSESSMENT REPORT, SITE 3-4, TASK 7

Comment 1: The prominent ground stain, visible on aerial photographs
Page 3 since 1948, appears to contain only one shallow, composited,
 boring investigated as part of the Section 3-UNC (Task 15)
 activities. This location should include at least one boring
 that samples 5 ft. depth intervals through the entire unsaturated
 zone.

Response: The results of the Phase I investigation at Boring 50, which was
 centered in the groundstain area, did not detect any target or
 non-target analytes. There was no information found to suggest
 the cause(s) of the groundstains. Further interpretation of the
 aerial photograph indicated that the ground stain in question may
 have been a storage area for scrap metal and wood debris
 resulting from railyard repairs. Based upon this information, it
 was determined that further investigation of the ground stain is
 unnecessary.

Comment 2: The ground stain in the western section of the railyard visible
Page 11 in the 1955 aerial photograph, is not shown on Figure 3-4-2
 (page 3). It cannot be discerned if any Phase I borings
 investigated this locality.

Response: The ground stain referred to includes the bulk of the railcar
 holding area from tracks 1 through 8. The Phase I and II
 investigations covered the periphery of this area. Sufficient
 sampling was conducted during the PETREX and Phase II program to
 adequately define the nature of the contamination.

Comment 3: The mounded material observed in the open storage area is not
Page 12 shown on Figure 3-4-2 (page 3). It cannot be discerned if
 Phase I borings investigated this locality.

Response: The mounded material referred to in the comment was not
 investigated during the Phase I program because there was no
 information available to suggest that dibromochloropropane spills
 or disposition of other wastes had occurred there. Historically,
 the storage area may have been used by the Army to store empty
 mustard cylinders in the early 1950's. In the 1960's and 1970's,
 the area was used for storage of scrap junk equipment. The bulk
 of the Phase II investigation concentrated on the internal track
 system within the railyard. Consequently, the mounds were not
 investigated under Task 7. Task 15, the Section 3 Nonsource
 area, investigated a location immediately north of the mounded
 material and detected no significant target or non-target
 analytes.

Comment 4: Borings 7 and 14 were the only two Phase I borings that were drilled to the water table. According to the Task 7 Technical Plan, "20% of all borings will be drilled to the water table", (page 3-8). Accordingly, three additional Phase I borings should have been drilled to the water table.

Response: As stated in the text (page 15), the boring program was modified based on historical information that became available after the completion of the Task 7 Technical Plan. The modification involved both moving boring locations to areas that appeared to be more likely areas of contamination based on the new information and adding new borings to more adequately cover an expanded area of potential contamination. Ten borings added were drilled to 5 or 10 feet. The purpose of these borings was exploratory, to locate areas of DBCP contamination in the most economical way possible. DBCP was not found in any of the soil samples at this site. If the results of the Phase II investigation around the one soil gas sample location where DBCP was found or the two soil samples where DBCP was found, indicate the possibility of contamination below the deepest Phase II sample, further sampling in the FS program will be considered.

Comment 5: No explanation is given for the high OVA readings recorded in Borings 7 and 8. The text that the readings were judged to be "insignificant". At what level would such readings be judged as significant?

Response: The OVA and HNL detect many volatile organic compounds. The instruments are used for health and safety monitoring and not for sample screening. A positive instrument response indicates that volatile compounds are present at the mouth of the borehole. They may be the result of compounds in the borehole or compounds, such as engine exhaust, in the ambient air. All samples below the 0-1 foot interval in borings 7 and 8 were sent for GC/MS volatile analysis. Thus, volatile compounds present in the intervals sampled would be detected.

Comment 6: No explanation was given for limiting M8 alarm use to Borings 3, 7 and 8. It would appear that the use of an M8 alarm would have been warranted at all borings in Site 3-4.

Response: The RI work was just beginning in 1985 when Borings 3, 7 and 8 were completed. At the time these were drilled, no analytic results had been returned from the laboratory. It was then standard practice to use all available field detection instruments. By 1986, when the balance of the borings at this site were completed, field experience informed by analysis of the results of sample analysis had led to a modification of the procedures for use of field detection equipment. By 1986, M8 kits were used only in areas where historical information indicated the presence of GB or VX. Site 3-4 is not such an area, therefore the M8 kits were not used at any of the 1986 boring locations.

Comment 7: The unexpected presence of 1,4-oxathiene in Boring 25 demonstrated a need for M8 alarm and analysis for chemical agents on all Phase I soil samples.
Page 51

Response: As noted in the response to Comment 8 by Shell Chemical Company in the final version (3.2) of the CAR (page 75), a review of laboratory analytical data revealed that 1,4-oxathiane was actually not detected in Phase I Boring 25, as previously indicated. The text was revised to reflect this change. Therefore, the use of an M8 alarm at Boring 25 as suggested by the State was not necessary.

Comment 8: The methylene chloride found in Borings 3, 7, 9 and 14 could represent significant contamination warranting further investigation. Any sample results thought to be influenced by laboratory contamination should be resampled and reanalyzed. Suspected laboratory contamination must be confirmed.
Page 51

Response: A history search has been initiated to determine if an investigation for methylene chloride is warranted. If so, an effective investigation to detect methylene chloride will be initiated. The necessity of this investigation will be determined by the Feasibility Study Group.

Comment 9: The semivolatile GC/MS method is not a certified method to verify the absence of nontarget volatile organic compounds, hence, any conclusions drawn from this method are inconclusive. The response to this comment, included in the White Cover CAR for 7-UNC, further substantiates the need to use a certified method for volatile organic compounds.
Page 52

Response: The response to the State's comment in the Final CAR for Section 7-UNC was written with regard to a site where volatile organic (VO) compound analyses were not conducted. In the case of Site 3-4, VO analyses were conducted and a number of compounds were detected.

The use of the semivolatile GC/MS analytical method to establish the presence or absence of high concentrations of higher boiling point volatiles is used as a qualitative tool to indicate possible contamination and to point out the areas where additional investigations are required. It is not intended to estimate concentrations of volatile compounds, (as in the case for GC volatile analyses) to prove conclusively the absence of low concentrations of the higher boiling point volatiles, or to indicate the absence of low boiling point volatiles.

Comment 10: The Phase II investigation should be expanded to include determination of the vertical extent of dibromochloropropane contamination at the PETREX Sample 6 locality.
Page 55

Response: As noted in the text on Page 55, the Phase II survey included 4 borings at and adjacent (within 10 feet) to PETREX Sample 6. Soil borings were drilled to a depth of 5 feet and sampled at the 0-1 and 4-5 foot intervals. The samples were analyzed for dibromochloropropane only. The PETREX method is capable of detecting volatile compounds in the soil within a limited vertical extent from the samples. The Phase II sampling program was designed to investigate the results obtained from the PETREX sampling program. Therefore, using the sampling protocol in the Task 7 Technical Plan, Phase II samples were collected to the next sampling interval below where dibromochloropropane may have been detected.

Comment 11: The proposed Phase II investigation is not in accordance with the distribution of Phase I and Phase II borings stipulated in the Task 7 Technical Plan. The Plan states that "Phase I will contain 30% of the borings and Phase II will contain 70%" (page 3-7). Phase I utilized 26 borings, accordingly, Phase II should include 61 borings, instead of the 12 proposed. No explanation is given as to why the Technical Plan is not being followed.

Response: The purpose of the Phase I investigation was to locate contamination from reported DBCP spills, no DBCP was reported from any soil sample taken in Phase I. The only DBCP detected was from a single PETREX soil gas sample (Sample 6). Detectable levels of other organic compounds were found in two borings, 27 and 14. The Phase II program was designed to define the extent of contamination around these three locations. The Army believes that the 12 borings proposed are adequate to assess contamination at these 3 locations.

Comment 12: The proposed Phase II boring depths are also not in accordance with the Task 7 Technical Plan. As proposed, the deepest Phase II borings (Borings 30, 31 and 32) would attain a depth of 8 feet, a depth insufficient to reach the water table. As stipulated in the Technical Plan, "20% of the borings will be drilled to the water table," (page 3-8). The Phase II boring depths should be modified accordingly.

Response: See Response to Comment 11 above.

Comment 13: Phase II boring samples around Boring 27 (Borings 30, 31 and 32) should also be analyzed for organosulfur compounds because of their proximity to the 1,4-oxathiane found in Boring 25.

Response: As stated in our response to Comment 7, 1,4-oxathiane was not actually detected in Boring 25. Consequently, the analyses conducted in Boring 28, 29 and 30 near Boring 27 are accurate based upon the results of the Phase I program. Additionally, based upon this comment as well as Comment 7, it is clear that the State was not able to review the final version of this CAR prior to making this comment.

Comment 14: At least two of the proposed Phase II borings located around the PETREX Sample 6 locality (Borings 33 through 36), should be of sufficient depth to sample the entire unsaturated zone. This locality has been the only one found at Site 3-4 that indicates the presence of dibromochloropropane. Accordingly, to adequately determine the vertical extent of dibromochloropropane contamination and its potential impact on ground water, deeper borings are needed.

Response: The PETREX method can detect volatile compounds emanating from soil or groundwater in the immediate area of the sample and to a limited distance from the samples. The PETREX method is not a USATHAMA-certified method for detecting DBCP in soils or ground water. Rather, it provides an indication that DBCP is present in some media in the vicinity of the samples. To determine the nature of the hit, should the Phase II soils data indicate that the vertical distribution of DBCP is not well defined, the Feasibility Study may consider additional sampling. Consequently, the borings located adjacent to PETREX Sample 6 were drilled only in the immediate vicinity of the hit and were not taken to the water table, as suggested.

Comment 15: The Phase II program should investigate the entire rail classification yard for the presence of dibromochloropropane. As presented earlier in this report at least six known, significant, dibromochloropropane spills occurred between 1965 and 1973 (p. 1- 37). Accordingly, it is very likely that the dibromochloropropane, that has been found in groundwater monitoring wells, is from numerous sources.

Response: As noted in Section 3.2 (Phase I Survey), all borings and all samples collected during this Phase I program were analyzed for dibromochloropropane, both by separate analysis and by GC/MS methods. The Phase II program was based upon the PETREX investigation, which detected dibromochloropropane at only one site. We believe that the procedures used to identify potential sources of dibromochloropropane contamination were based on thorough historical and field investigations. Therefore, additional studies to identify dibromochloropropane are not warranted. The premise of this survey was based upon the very spills referred to in this comment. However, it was never known as a fact that the spills actually occurred within the boundaries of Site 3-4. The final version of this report was revised to reflect this.

Comment 16: Because the GC/MS scan does offer a greater level of confidence in compound identification, more than 10% of the Phase II samples should be subjected to this analytical method.

Response: The Phase I sample analysis used the GC/MS method to identify compounds. The identification results of this method can be relied on to a high degree of confidence, but the concentration levels determined by this method are only semi-quantitative. Conversely, the GC method produces quantitative concentration level results, but less reliable identification results. The Phase II analysis is based on the GC method because the purpose of Phase II was to determine the extent of contamination once the kind of contamination had been determined in Phase I. The 10% GC/MS confirmation was done as a final check of the Phase I results.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2405

MAY 6 3 1988

Ref: 8HWM-SR

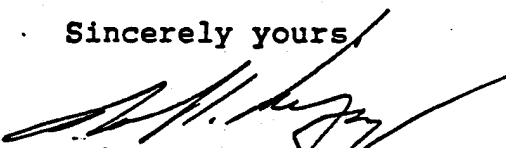
Colonel W. N. Quintrell
Program Manager
AMXRM-EE Department of the Army
U.S. Army Toxic and Hazardous Materials Agency
Building 4460
Aberdeen Proving Ground, Maryland 21010-5401

Re: Rocky Mountain Arsenal
(RMA), Task 7, Site 3-4,
Draft Final Phase 1
Contamination Assessment
Report, Nemagon Spill Area,
December, 1987.

Dear Colonel Quintrell:

We have reviewed the above referenced report and have the enclosed comments from our contractor. Our contact on this matter is Mr. Connally Mears at (303) 293-1528.

Sincerely yours,


Robert L. Duprey, Director
Hazardous Waste Management
Division

Enclosure

cc: Thomas P. Looby, CDH
David Shelton, CDH
Lt. Col. Scott P. Isaacson
Chris Hahn, Shell Oil Company
R. D. Lundahl, Shell Oil Company
Thomas Bick, Department of Justice
David Anderson, Department of Justice
Preston Chiaro, EBASCO

RESPONSE TO COMMENTS OF THE
ENVIRONMENTAL PROTECTION AGENCY ON
DRAFT FINAL CONTAMINATION ASSESSMENT REPORT
SITE 3-4, TASK 7

Comment 1: The DBCP hit in PETREX Sample 6 could have originated from a relatively deep area of the unsaturated zone, or possibly even from the contaminated ground water itself. Therefore, EPA recommends that at least one of the four Phase II borings (33, 34, 35 and 36) surrounding the PETREX hit be drilled and sampled to the ground water table. Furthermore, EPA recommends that this boring be completed as a ground water monitoring well with the screen set in the upper five feet of the saturated zone.

Response: The PETREX method can detect volatile compounds emanating from soil or groundwater in the immediate area of the sample and to a limited distance from the samples. The PETREX method is not a USATHAMA-certified method for detecting DBCP in soils or ground water. Rather, it provides an indication that DBCP is present in some media in the vicinity of the samples. To determine the nature of the hit, should the Phase II soils data indicate that the vertical distribution of DBCP is not well defined, the Feasibility Study may consider additional sampling. Consequently, the borings located adjacent to PETREX Sample 6 were drilled only in the immediate vicinity of the hit and were not taken to the water table, as suggested.

Also, six soil borings located near PETREX Sample 6 were located in or near a ditch to the west and downslope of the rail tracks, or to the southeast, away from Tracks 3, 4, and 7, where dibromochloropropane was reportedly "held" in rail cars (according to Shell memos). These borings were drilled to depths ranging from 10 feet (Borings 17 and 18) to 60 feet (Boring 14) and ranged in distance to PETREX Sample 6 from 75 to 300 feet. None of these borings detected dibromochloropropane.

Comment 2: Oxathiane was found in boring 25. Since this is a breakdown product of Mustard, thiodiglycol should also be analyzed in the Phase II samples surrounding this boring.

Response: The report of an oxathiane hit in the Draft Final was an error and corrected in the Final Version of this report. The reported concentration level in the Draft Final was equal to the detection limit. Upon review of the laboratory records, it was discovered that the results for oxathiane had, in fact, been reported as less than the detection limit by the laboratory. The "less than" designation had been erroneously dropped in the data report used to prepare the Draft Final.

Shell Oil Company



c/o Holms Roberts & Owen
Suite 1800
1700 Broadway
Denver, CO 80290

February 2, 1988

FEDERAL EXPRESS

Mr. Donald L. Campbell
Department of the Army
Office of the Program Manager
Rocky Mountain Arsenal
Contamination Cleanup
ATTN: AMXRM-EE
Bldg. 4460
Aberdeen Proving Ground, MD 21010-5401

Re: United States v. Shell Oil

Dear Mr. Campbell:

Enclosed herewith are Shell Oil's comments on Draft Final Contamination Assessment Report for Site 3-4, Nemagon Spill Area, Task 7, December 1987.

Sincerely,

A handwritten signature in black ink, appearing to read "C. K. Hahn".

C. K. Hahn
Manager
Denver Site Project

CKH/mp/14437

Enclosure

cc: (w/enclosure)
USATHAMA
Office of the Program Manager
Rocky Mountain Arsenal Contamination Cleanup
ATTN: AMXRM-EE: Mr. Charles Scharmann
Bldg. E4460, Trailer
Aberdeen Proving Ground, MD 21010-5401

Mr. Thomas Bick
Environmental Enforcement Section
Land and Natural Resources Division
U.S. Department of Justice
P.O. Box 23896
Benjamin Franklin Station
Washington, DC 20026

Lt. Col. Scott P. Isaacson
Headquarters - Department of the Army
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Washington, DC 20310-2210

Ms. Patricia Bohm
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Mr. Jeff Edson
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Mr. Robert L. Duprey
Director, Air and Waste Management Division
U.S. Environmental Protection Agency, Region VIII
One Denver Place
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Denver, CO 80202-2413

Mr. Connally Mears
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VIII
One Denver Place
999 18th Street, Suite 1300
Denver, CO 80202-2413

RESPONSE TO COMMENTS OF
SHELL COMPANY ON DRAFT FINAL
CONTAMINATION ASSESSMENT REPORT
SITE 3-4, TASK 7

Comment 1:
Executive
Summary,
first
paragraph

"The site (Site 3-4) is an area where Nemagon (dibromochloropropane) reportedly was spilled periodically between 1967 and 1976".

This statement that Nemagon was reportedly spilled periodically at this site is without basis. Shell's documentation of spills on the RMA revealed no known spill of Nemagon at this site. The Nemagon incidents listed on page 13 of this Draft Final report either did not occur at this site or, in Shell's opinion, are unlikely to have occurred at this site (see comment #4).

Response:

Although losses or spills of dibromochloropropane did occur on RMA, it is not known if, in fact, the spills occurred within the boundaries of Site 3-4. Therefore, the text of the executive summary has been revised.

Comment 2:
Pg 1, 1.1,
Location

With references to the third from last sentence, railcars containing dibromochloropropane (DBCP) were stored at this site but loading and unloading of the cars occurred in the South Plants area. No facilities for loading or unloading DBCP ever existed at this site.

Response:

The text has been revised to clarify that the track system in the railyard could only accommodate temporary storage of railcars, and was not equipped for loading or unloading.

Comment 3:
Pg. 12,
Paragraph 1

". . . it appears that Site 3-4 has been used as a handling area for dibromochloropropane being shipped by rail and as a storage area for the railcars".

It is unclear what is meant by a handling area for dibromochloropropane. With respect to dibromochloropropane, Shell does not believe that any activity occurred at this site other than the storage of railcars.

Response:

History reviews of activities at the site indicate that railcars containing dibromochloropropane intended for shipment off post were temporarily "held over" in the area until either cleared for shipment or rail lines were open for transport to their intended destinations. The text has been revised to clarify the issue of Shell's concern.

RESPONSE TO COMMENTS OF
SHELL COMPANY ON DRAFT FINAL
CONTAMINATION ASSESSMENT REPORT
SITE 3-4, TASK 7 (continued)

Comment 4:
Pg. 13,
Descriptions
of Spill
Incidents

September 1965

Any loss of Nemagon C due to a tank cleaning mishap probably did not occur in the rail classification area since Shell did not have either tanks or tank cleaning facilities in that area.

February 1966

There were no facilities in the rail classification area for reprocessing Nemagon C, therefore Shell does not believe that this incident occurred at this site. Also, a "loss" does not indicate a release to the environment, but instead represents unrecoverable materials disposed of by conventional means.

June 1970

This incident involved the disappearance of a portion of a shipment lot. It may have disappeared in-transit or may even be a manifestation of an error in preparation of shipping documents. It should not be characterized as a spill.

November 1971, November 1973

Shell's records indicate that these spills were located in the South Plants area (near Building 471), not in the rail classification area. See Shell's letter from C.K. Hahn to D.L. Campbell dated May 1, 1985 which documents Shell's knowledge of spills in the South Plants area.

Response:

As noted in the paragraph prior to the spill list, the precise locations of the spills or other types of material disposition were for the most part unknown. As noted in Shell's comments, it is recognized that "losses" may not have been actual "spills", and may have been either recovered by some other means or were shipping manifest errors. However, the term "loss" is taken directly from Shell memos, with no explanation defining that term. In any case, the ultimate disposition of the dibromochloropropane is unknown. Review of Shell's 5/1/85 memo from C.K. Hahn to D. Campbell (PMO) and historical investigations conducted in support of the South Plants Spills Site (Site 1-13/2-18) investigation confirms that the 1971 and 1973 spills probably did occur in the South Plants area. Therefore, these two spills have been taken out of the revised test.

Comment 5:
Section 3.2.5,
Pg 51, second
paragraph

"Finally, there is no historical evidence to suggest that methylene chloride was present in rail cars stored at the site"

RESPONSE TO COMMENTS OF
SHELL COMPANY ON DRAFT FINAL
CONTAMINATION ASSESSMENT REPORT
SITE 3-4, TASK 7 (continued)

Shell believes that it may have received (thus stored in the rail classification area) tank cars of methylene chloride in 1964 in connection with initiation of Azodrin Insecticide production. Shell has no record of a spill methylene chloride in the rail classification yard.

Response:

A history search for compounds other than dibromochloropropane that may have been present at the site has been initiated. The results of this history search will provide the necessary information to determine if an investigation for methylene chloride is warranted and if so, to design an effective investigation for methylene chloride. The necessity of this investigation will be determined by the Feasibility Study group.

Comment 6:
Pg 55, first
bullet

Substitute contamination for spill in this statement.

Response:

The text has been changed to reflect this comment.

Comment 7:
Pg 56, Second
Paragraph

Although PETREX Sample 6 had a detectable level of DBCP from the DBCP soil gas field program, no DBCP was found in samples from the six adjacent soil boreholes. The apparent detection of DBCP in Sample 6 may reflect DBCP vapors from a zone deeper than was sampled in the Phase I boring program (The three borings nearest Sample 6 sample point were only to twenty feet). Since Sample 6 is the only lead on a possible DBCP spill site, it is recommended that the four Phase II boreholes (#33, 34, 35, and 36) be drilled and sampled to the groundwater table.

Response:

The six borings referred to in Shell's comment were located in or near a ditch to the west and downslope of the rail tracks, or to the southeast, away from Tracks 3, 4, and 7, where dibromochloropropane was reportedly "held" in rail cars (according to Shell memos). These borings were drilled to depths ranging from 10 feet (Borings 17 and 18) to 60 feet (Boring 14) and ranged in distance to PETREX Sample 6 from 75 to 300 feet. The PETREX method can detect volatile compounds in the soil in the immediate area of the sample and to a limited a distance from the samples. Since the vapor pressure of dibromochloropropane is low, and groundwater concentrations of dibromochloropropane are low (less than 50 ppb), the potential for vapor to be emanating from the water table area

RESPONSE TO COMMENTS OF
SHELL COMPANY ON DRAFT FINAL
CONTAMINATION ASSESSMENT REPORT
SITE 3-4, TASK 7 (continued)

is unlikely. Also, a number of PETREX samples within 40 feet of each other and from PETREX Sample 6 did not detect the presence of dibromochloropropane in near-surface soils. If vapors were to emanate from below ground, it might be fair to expect that more than one sampler would detect dibromochloropropane. Consequently, the borings located adjacent to PETREX Sample 6 will remain only in the immediate vicinity of the hit and will not be investigated to the water table, as suggested.

Comment 8:
Pg 57, Figure
3-4-7a

Samples from Phase II borings 28 and 29 should be analyzed for mustard degradation products thiodiglycol and chloroacetic acid due to the presence of 1-5 oxathiane in Boring 25.

Response:

A recent review of laboratory analytical data revealed that 1,4-oxathiane was not detected in Phase I Boring 25, as previously indicated. Consequently, the text has been revised and the two borings (28 and 29) removed from the Phase II program. All remaining Phase II borings have been renumbered to maintain continuity with Phase I borings.

RESPONSES TO GENERAL COMMENTS
OF COLORADO DEPARTMENT OF HEALTH AND ENVIRONMENTAL PROTECTION AGENCY ON
DRAFT FINAL CONTAMINATION ASSESSMENT
REPORT, SITE 3-4, TASK 7

The draft final report was sent to the Colorado Department of Health and Environmental Protection Agency on December 29, 1987. The one month comment period has been exceeded, and no comments on the report were received in time for inclusion in this report.

Appendix 3-4-D

Letter Technical Plan - Site 3-4

Soil Gas Investigation

September 10, 1987
EMA20-EDEN-USA-T-010

Commander, Office of the Program Manager
for Rocky Mountain Arsenal Contamination Cleanup
ATTN: AMXRM-EE/J. Lopez
Building E4460
Aberdeen Proving Ground
Maryland 21010-5401

Subject: Revision of Letter Technical Plan for Task 20 - Soil Gas Study at
Site 3-4

Dear Juan:

Ebasco Services Incorporated (Ebasco) proposes to revise the planned PETREX soil gas investigation at Site 3-4 on the Western Tier of the Rocky Mountain Arsenal. The revised program will focus the investigation in areas where recently obtained Shell documents indicate that the dibromochloropropane (DBCP) tank cars were stored and shipped. The purpose of the study is to identify potential areas of DBCP soil contamination.

Site History

Site 3-4 is located in the western portion of Section 3 on the Rocky Mountain Arsenal. Included in the area is a rail classification yard which was used for storage of DBCP containing rail cars and shipment of DBCP off-site. Shell documents indicate that the northern portion of rails 3, 4, and 7 were used for DBCP containing cars. See attached hand drafted sketches.

DBCP has been detected in the groundwater beneath and northwest of the rail classification yard. Concentrations tend to be greater near the rail yard indicating that the rail yard is a potential source of the DBCP groundwater contamination.

The site was investigated under Task 7 in the summers of 1985 and 1986. A total of 27 borings, yielding 91 soil samples, were drilled to depths ranging from 5 to 75 feet. All 91 samples were analyzed for Nemagon with detection limits ranging from 0.005 to 0.014 ug/g. Nemagon was not detected in any of the samples.

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Page Two

Proposed Program

Although the previous investigation did not detect Nemagon at Site 3-4, historic information indicates that Nemagon was handled in the area. In addition, a DBCP groundwater plume, which appears to originate in the rail classification yard, has been identified. Therefore, additional investigation is warranted.

A PETREX soil gas investigation is proposed. The PETREX method can detect volatile compounds in the soil in the immediate area of the sampler, soil contamination some distance from the sampler, and groundwater contamination. Since groundwater concentrations are quite low (less than 50 ppb), the purpose of the PETREX investigation will be to assess the presence and distribution of any DBCP soil contamination. The PETREX technique has detected DBCP off-site in Adams County, but several PETREX samplers placed on Site 3-4 in a previous investigation did not detect DBCP.

A laboratory test program designed to determine the applicability of lower detection limit DBCP techniques has been conducted (Ebasco Letter Technical Plan, RMA20-EDEN-USA-T-002). Initial results indicate that the detection limit for DBCP has been lowered by approximately one order of magnitude from that used in previous investigations and the PETREX samplers were capable of detecting DBCP in soils spiked with concentrations as low as 1 ppb.

Sampler Placement

The proposed program will place 90 samplers in the portion of Site 3-4 highlighted on the attached figure. Samplers will be placed in soils immediately adjacent to rails 3, 4, and 7, and in adjacent areas where surface runoff from these rails would migrate. Samples will be staggered on both sides of each rail line and/or will be placed in adjacent low or stained areas at the discretion of the field crew. Of the 90 samplers, 25 will be placed along each of the three rail lines and 15 will be placed in the adjacent run-off area. The portion of the rail lines to be investigated are each approximately 1,000 feet long. Thus, 25 samples on each line will result in a sampler density of one per 40 linear feet of rail line. Additionally, the runoff area is a linear zone approximately 600 feet long so the 15 samplers will also result in a one per 40 linear feet sample density.

Samplers will be placed in shallow hand augered or dug holes. Each location will be clearly marked with a stake or a painted mark.

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Page Three

Sampler Retrieval

Approximately 30 days after placement of the samplers, they will be retrieved and immediately shipped to PETREX in Lakewood, Colorado for analysis. Results will be reported to Ebasco within 30 days.

Field Monitoring

In-situ air and soil monitoring will be conducted during sampler installation operations by the on-site health and safety supervisor using a photoionization detector (HNU) or an organic vapor analyzer (OVA).

QA/QC

All sampler collection, storage, and shipping procedures will conform to the standards outlined in the Rocky Mountain Arsenal Procedures to the Technical Plan. All equipment used for drilling or digging will be thoroughly washed and rinsed between each hole.

Reporting

Ebasco will prepare a letter report documenting the field and analytical procedures. The soil gas data collected will be presented with an analysis discussing the potential for soil contamination in and near the areas where soil gas samplers were placed. Should PETREX results indicate the presence of DBCP, supplementary soil samples may be collected.

Please advise us immediately regarding your concurrence with our proposed program. Thank you for your consideration.

Sincerely,



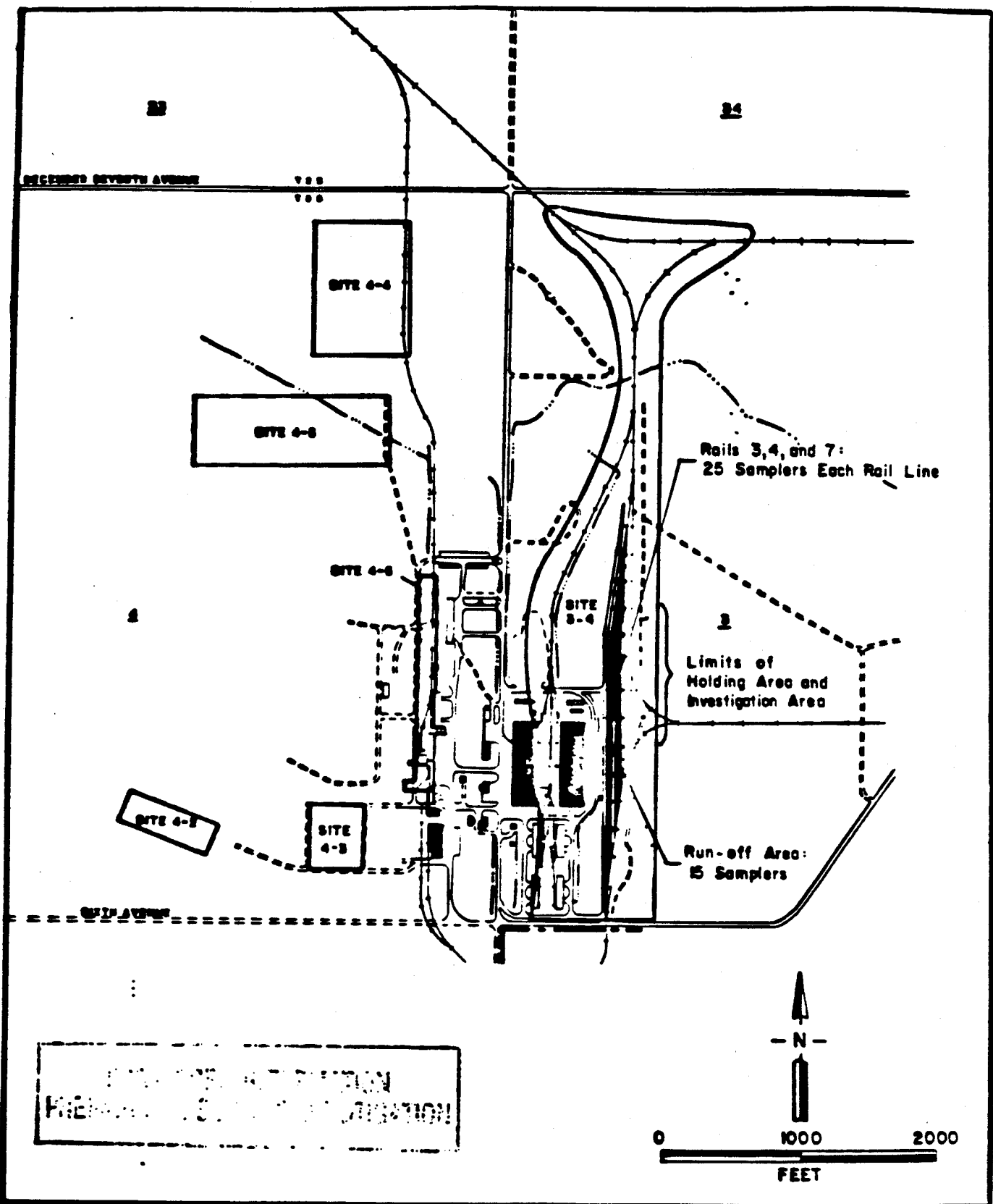
Douglas L. Cushing
Task 20 Manager

DLC:jah
Enclosures

cc: D. Campbell
K. Blose
P. Chiaro
J. Keithley
K. Knirsch
D. Meyer
DCC/Denver
Chron File

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Prepared for

Program Manager's Office for
 Rocky Mountain Arsenal Cleanup
 Aberdeen Proving Ground, Maryland

Drafted: 7/17/87

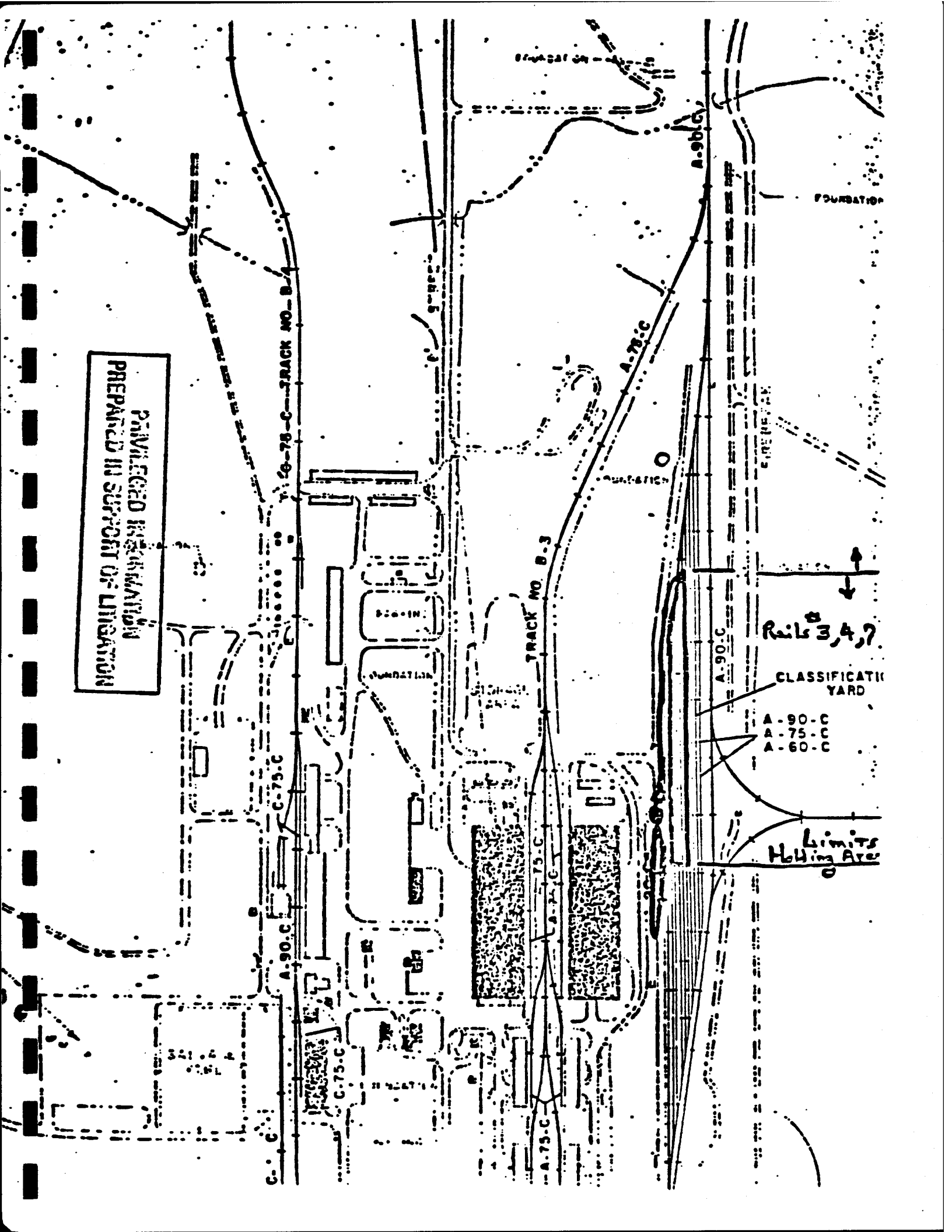
FIGURE

Soil Gas Sampling
 Location Map

Rocky Mountain Arsenal, Task 20

Prepared by: Ebasco Services Incorporated

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Rails 3, 4, 7

CLASSIFICATION YARD

- A-90-C
- A-75-C
- A-60-C

Limits Holding Area

